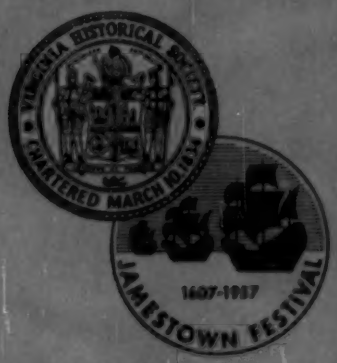
THE

Virginia Magazine

OF HISTORY AND BIOGRAPHY



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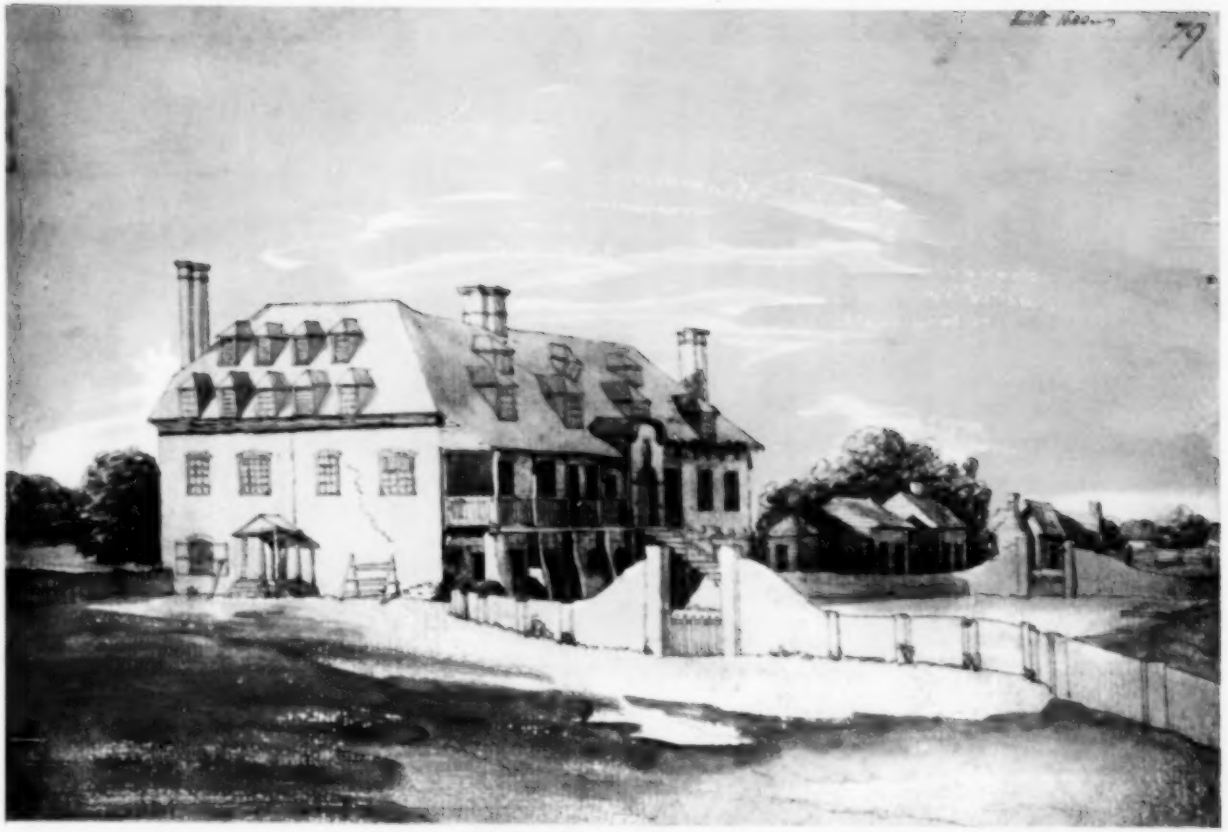

Green Spring Mansion
by Benjamin Henry Latrobe

The Virginia Magazine
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VOL. 65 *January 1957* NO. 1

MULBERRY TREES AND SILKWORMS

Sericulture in Early Virginia

by CHARLES E. HATCH, JR.*

THERE is little reason to wonder why the early colonists at Jamestown were conscious of silk, the silkworm, and the mulberry tree, for their sovereign James I was a devout patron of sericulture. In it he had a lasting and persistent interest. He encouraged his subjects in this too, requiring landowners to purchase and plant mulberry trees and recommending that they foster the cultivation of the silkworm as both a desirable and a necessary endeavor. All over England this was emphasized, and it led to the establishment of mulberry nurseries as well as to the construction of silkworm accommodations. The King himself took the lead in planting a tract in mulberries near his Westminster palace and later in building a special establishment with a keeper employed to care for his worms, all the while urging his subjects to follow his example both by written and oral exhortation.[1]

Silk had been known for centuries and its use had increased with the passing generations. It was, however, neither common nor easy to come

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[1]Mary Anne Everett Green, ed., *Calendar of State Papers, Domestic Series, of the Reign of James I* (London, 1857-1858), *1603-1610*, pp. 344, 398, 562: *1611-1618*, pp. 29, 246, 555, 592: *1619-1623*, p. 422; J. C. Loudon, *Arboretum et Fruticetum Britannicum* (London, 1844), III, 1352; Alexander Brown, ed., *The Genesis of the United States* (Boston, 1890), II, 1022.

In January 1607 King James ordered the planting of 10,000 mulberry trees, and in January 1608 he licensed one William Stallenge to promote the planting and the better breeding of silkworms. In 1609 Stallenge was given a warrant for £935 for enclosing ground and planting mulberries at "Westminster Palace." Two years later the King's attendant is known to have had nine pounds of silk spun from the cocoons of his worms. In 1614 a grant was made to John and Francis Bonnal (Bonoeil) for the office of keeping silkworms at Whitehall and Greenwich. This interest of James I continued. An entry in the records for July 1618 tells that the King's "Groom of the Chamber" was paid his expenses for a three months' period during which he was traveling about with the King's silkworms wherever "His Majesty" went.

by in early seventeenth-century England. Moreover, it was a promising new industry. Silk culture, the organized rearing and care of silkworms and their cocoons, began, it seems, some 5,000 years ago in a distant China province. Knowledge and use of it spread slowly across Asia and into Europe. The well-guarded secret of its production traveled even more slowly but finally was known along the shores of the Mediterranean. It was late in the fifteenth century that its culture was established in France where it grew rapidly. The sixteenth century saw it introduced into England. Experimentation with it gained some momentum in the reign of Queen Elizabeth, but at the turn of the seventeenth century it was still little more than a hopeful prospect.[2] Consequently, it was only natural that James I should seek, with the royal sanction, to push for the maturity of a relatively new and promising item in the economy.

These and other attempts to raise silkworms on a commercially profitable scale in England were to prove disappointing and unsuccessful while the manufacture of the raw silk supplied by other countries was to grow, later, into a sizeable industry. This, however, in no way lessened King James's interest in raising silkworms himself, in exhorting his countrymen to do likewise in England, and in pointedly emphasizing that such endeavor be undertaken in Virginia. His interest was both in the culture and in the manufacture.

I

The Jamestown colonists were not long in answering the royal directive. The very first settlers in Virginia were quick to note that the mulberry tree —essential food of the silkworm—grew naturally here both in quantity and in size. This was the red rather than the more commonly used white mulberry that they saw; however, this was not thought to be of particular consequence. Word went back to England and soon silkworm eggs ("seed" they were called) were being hatched, and worms were being tended at Jamestown—an act that gave English America's first permanent settlement another entry in its long list of priorities.

This first attempt at sericulture on the James was short-lived. It was nevertheless an honest effort to use a natural resource of the country to create a product that would satisfy a demand for goods and thereby estab-

[2]William Kendrick, *The American Silk Growers' Guide; or the Art of Raising the Mulberry and Silk* (Boston, 1839), pp. 9-16, 147; John d'Homergue and Peter Stephen Duponceau, *D'Homergue upon American Silk. Report on the Committee on Agriculture on the Growth and Manufacture of Silk* (Washington, 1830), pp. 9-13.

lish a source of income. Like the unsuccessful effort to make glass in 1608, it represents one of our first economic efforts. Unlike glass manufacture, however, it was not easily abandoned. It was persistently pursued throughout much of the seventeenth century and even in later times, not only in Virginia but in the other colonies as well.

The story of the very first effort in sericulture was cryptically described by Captian John Smith in 1612 in his description of the Virginia that he saw and knew during the years of 1607-1609 when he was a leader in the Colony. He relates:

> By the dwellings of the Savages are some great Mulberry trees; and in some parts of the Countrey, they are found growing naturally in prettie groves. There was an assay made to make silke, and surely the wormes prospered excellent well, till the master workeman fell sicke: during which time, they were eaten with rats.[3]

It is difficult to determine the exact time at which this "assay" was made. We do know, however, that the "Silkemen, with [not only] all their appurtenances but materialls,"[4] including "seed," came either with the First Supply which arrived near the beginning of January in 1608 or in the Second Supply which reached Virginia in the fall of the same year. Such could have been made ready for dispatch in the First Supply. No great preparations would have been necessary, when the ships that brought the settlers to Virginia arrived back in England with news about the abundance of mulberry trees, other than the location of "Silkemen" who would make the journey, a stock of "seed," and, perhaps, a few materials. Since natural food was available this created no problem. Had they come in the First Supply, it would not have been necessary to keep the "seed" all winter with the subsequent possibility of damage.

There is some evidence, however, that suggests that they came in the Second rather than in the First Supply. In this case it was in the late fall of 1608 and in the winter and early spring of 1609 that the "Silkemen" were busy at Jamestown with the construction of the appropriate and necessary housing and frames either in their quarters in, or adjacent to, the "Fort" or in a nearby special building set aside for the purpose. The "seed" were hatched late in March, or early in April, as the first tender leaves appeared on the mulberries which had been previously located for the purpose of sustaining the worms. The gathering of leaves and the constant

[3]Edward Arber, ed., *Travels and Works of Captain John Smith* (Edinburgh, 1910), I, 56.

[4]John Smith in his *Advertisement for the unexperienced, or a Path-way to erect the Plantation* (1631) in Arber, *Travels and Works of Smith*, II, 928.

watch over the worms then began. Before the work was complete, however, the "master workeman" became ill and neglect ensued to the extent that the rats overran the silk "establishment" and ate the worms.

The possibility that these activities occurred in March and April 1609 during the second, rather than the first, spring that the settlers were in Virginia, is drawn from the known fact that in April 1609 Jamestown was deluged with "many thousand rats." These, which had "increased so fast" from those first brought in "from the ships," destroyed not only the silkworms but also the supply of corn—that essential grain—which the colonists then had on hand.[5]

Even accepting the Second Supply date, however, sericulture came early in the Virginia colony and as such constitutes one of America's industrial beginnings, a number of which, like it, are associated with Jamestown. It was a contemporary of the attempts to produce "Pitch," "Tarre," "Frankincense," "Glasse," and "Sope Ashes," however, it came after earlier beginnings in agriculture, lumbering, the fabrication of wood products (clapboards and masts), shipbuilding, and mining, only the last of which had negative results.[6]

The abrupt halt to the first try at the introduction of silk culture in Virginia apparently discouraged no one for long. Promotional literature describing the Colony continued to extoll the natural advantages of the country and the products which were surely destined to succeed. Silk was almost invariably one of these products. In 1610 Sir Thomas Gates reported that there was an abundance of mulberry trees "which in so warme a climate may cherish and feede millions of silke wormes, and returne us in a very short time, as great a plenty of silks as is vented into the whole world from al[l] the parts of Italy." In this Gates was reflecting the same opinion about the silk production potential that was shared by most of the early colonists who have left a record of their opinion. Even John Smith, who became critical of the Company efforts to establish such activities in the very first years of the Colony, felt that "Silke" was among those things which the

[5]Arber, *Travels and Works of Smith*, I, 155, and II, 471.

[6]Grain was planted in May 1607 and there is reference to the export, early in 1608, of "masts, cedar ["logs"], blacke wallnutt, clapboarde" and "Gould oare . . . which beinge sent from England proved dirt." A ship was assembled at Cape Henry soon after the landing there on April 26, 1607. These are before the trials of pitch, tar, glass, frankincense, soap ashes, clapboard, and wainscote which, it is stated, were sent home in December 1608 in the ships which seemingly had brought the silkworm seed. (Lyon G. Tyler, *Narratives of Early Virginia, 1606-1625* [New York, 1930], pp. 19, 71, 61, 136, 139, 159; Thomas H. Wynne and W. S. Gilman, *Colonial Records of Virginia*, Virginia Senate Document, Extra [Richmond, 1874], p. 70; Louis B. Wright, ed., *The History and Present State of Virginia* by Robert Beverley [Chapel Hill, N. C., 1947], pp. 30-31).

country would afford in time by industry even to the extent of replacing the Italian market.[7]

Among those things considered needed for the "Plantation" of Virginia late in 1609, or early in 1610, were "2. Silke-dressers."[8] Instructions issued to Gates (who was coming as governor to Virginia) in May 1609, just as the first effort to produce silk was ending on the banks of the James, specified that he seek to encourage sericulture. Such instructions were repeated for Lord Delaware just a little later.[9] William Strachey, writing in 1612, tells us that "this wilbe a commoditie not meanely profitable." Then he added "Now yt is seriously considered of, and order taken that yt shalbe duly followed."[10] This seems to establish the fact that sericulture was again underway in Virginia.[11] It seemingly was followed on a small scale without serious interruption for the next five years.

There is record that additional "seed" were sent to Virginia in the ship *Elizabeth* which left England in October 1613 and reached the Colony in the following winter. The worms "came foorth many of them the beginning of *March*, others in *Aprill*, *Maye*, and *June*" at which time it was further reported by Ralph Hamor that "thousands of them [had] grown to great bignesse, and [were] a spinning, and the rest well thriving of their

[7]Virginia Company, *A True Declaration of the estate of the Colonie in Virginia* (London, 1610) as printed in Peter Force, ed., *Tracts and Other Papers Relating Principally to the Original Settlement and Progress of the Colonies in North America* (Washington, 1838-1846), Vol. III, Tract No. 1, p. 22. Arber, *Travels and Works of Smith*, I, 64, and II, 928.

[8]Virginia Company, *A True and Sincere declaration of the purpose and ends of the Plantation begun in Virginie . . .*" (London, 1610) as given in Brown, *Genesis*, I, 353.

[9]Susan Myra Kingsbury, ed., *The Records of the Virginia Company of London* (Washington, 1906-1935), III, 22. Hereinafter cited as *Records Va. Co.*

[10]William Strachey, *The Historie of Travaile into Virginia Britannia*, R. H. Major, ed., (London, 1849), p. 117.

[11]Strachey records the history of the first attempt in very much the same language as that used by Captain John Smith which is quoted above.

In 1612 William Strachey wrote too about a "kind of silke grasse [which] growes there [in Virginia], as yet disorderly, which having the grownd prepared and fitted for yt, would retribute a commoditie worthie the paines." This silk grass, so named "because of its accession to the quality of silke," was separate and distinct from the silk of the silkworm. The plant in question here is *Yucca filamentosa* (Adam's needle, bear grass, common bear grass) an exotic and desert country looking plant that is actually a variety of Yucca which is indigenous to the Atlantic coastal area from Maryland to Florida. It was found growing naturally in Virginia (particularly in the Point Comfort-Kecoughtan area) and can still be found, quite often, about old gardens. (Strachey, *Historie*, p. 61; Brown, *Genesis*, I, 385, 504; Earl G. Swem, *Brothers of the Spade: Correspondence of Peter Collinson, of London, and John Custis, of Williamsburg, Virginia, 1734-1746* [Worcester, Mass., 1949], pp. 46, 169; Alfred Rehder, *Manual of Cultivated Trees and Shurbs Hardy in North America . . .* [New York, 1927], p. 76; *Gray's New Manual of Botany* [7th edition, New York, 1908], p. 290; Edward Williams, *Virginia: More Especially the South Part Thereof, Richly and Truly Valued* [London, 1650], in Force, *Tracts*, Vol. III, Tract 11 (hereinafter cited as Williams, *Virginia Valued*), pp. 24-25).

Even before 1612 Sir Thomas Gates and Lord Delaware had been instructed to be alert "in gatheringe silke of the grasse" as a merchantable product in the company of hemp and flax—a

increase, and commodity well knowne to be reaped by them." He went on to predict: "we have almost assurance (since sure I am) no Country affoordeth more store of *Mulbery* trees, or a kind with whose leafe they more delight, or thrive better."[12]

Some Virginia grown silk was carried to England by John Rolfe in 1616. This conclusion is drawn from Rolfe's statement that "Silke-wormes some of their labors, and tastes of other good and vendible commodities were now brought home."[13] He wrote this while in England where he had gone in 1616 with his bride, Pocahontas. This checks, too, with the report that some "samples" of the "desyred worke of Silkwormes" was "by the Industry of Sr Tho: Dale . . . sent home in the 9th and tenth year [1616 and 1617] of those 12 first years."[14] That experienced supervision was available in the colony at this time is known for John Bonoeil, a silkworm keeper of much skill for James I, mentions, in 1622, a servant trained by him in the rearing of worms who spent at least six years in Virginia where he went about 1615.[15] Thus by 1616 silk culture had succeeded to the point that a proof of production went home to England undoubtedly to the great satisfaction of the settlers and Company sponsors as well. The initial proof submitted in 1616 was followed by additional proofs in the exports of the next year.

On June 9, 1617, Governor Samuel Argall, in a letter drafted at "James Town" about a month after his arrival in Virginia, reported that "silk

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suitable source for cordage—"approved to make the best Cordage and Lyne in the world." (*Records Va. Co.*, I, 352, III, 22). Ralph Hamor, in 1614, reported: "Now I proceed to the silke grasse which groweth like unto our flax . . . Captaine *Martin* . . . hath made, exceeding fine and exceeding strong silke, and himself hath replanted many of the wilde plants this yeere, the silke whereof he purposeth to returne for triall." (Ralph Hamor, *A True Discourse of the Present Estate of Virginia* [London, 1615], p. 35)

Interest in the development of this plant continued for decades. Samples of it were sent home from time to time although little came of it. Although thought of most often as chiefly suitable for cordage and coarse material it was described as late as 1649 as "a kind of Flax the *Indians* use to make threeds of and strings . . . it's fine to make both Linnen and Stuffe of it; abundance in many places of it groweth." (*A Perfect Description of Virginia: Being a full and true Relation of the Present State of the Plantation* [London, 1649] in Force, *Tracts*, II, Tract No. 8, p. 10; Edward D. Neill, *History of the Virginia Company of London* [Albany, 1869], pp. 174, 373. Sarah P. Stetson, "John Mercer's Notes on Plants" in *Virginia Magazine of History and Biography* (hereinafter cited as *VMHB*), LXI, 36.)

[12]Hamor, *A True Discourse*, p. 35; Brown, *Genesis*, II, 663, 689; Alexander Brown, *The First Republic in America* (Boston, 1898), p. 202.

[13]John Rolfe, *A True Relation of the State of Virginia lefte by Sir Thomas Dale Knight in May last 1616* (Printed from the original manuscript in the private library of Henry C. Taylor, New Haven, 1951), p. 35.

[14]*Records Va. Co.*, II, 396.

[15]John Bonoeil, *A Treatise of the Art of Making Silke, or, Directions for Making Lodgings, and the Breeding, and Ordering of Silkewormes, for the Planting of Mulberry Trees, and All Other Things Belonging to the Silke Art* . . . (London, 1622), p. 2. (This work is hereinafter cited as Bonoeil, *Art of Making Silke*.)

wormes thrive exceedingly" indicating the continued success of the venture.[16] Following this optimistic statement there is little data on Virginia sericulture for the next two years. There is evidence to indicate that it was allowed to lapse while attention went elsewhere when Argall was directing Colony affairs. One accusation (made during the heated argument that later plagued the Virginia Company) was that in this period "all the endeavors for those other Comodities were abandoned and the Colony possessed of that Dotinge affection to Tobacco." It was said, too, that the underpricing of silk was a major deterrent to production.[17] Whatever the cause for the lessening of attention to the silkworm, it was but a temporary condition.

Before continuing the story, it is well to point out that the successful efforts to produce silk in the period between 1612 and 1617 represented a well-organized effort. It is recorded that "there was a house built to preserve the Wormes in when they Wrought and Mulberry trees were alsoe planted . . . neere the habitations of our people."[18] It would appear that some of the silkworms raised at this time, as was true less than a decade later, may have been hatched from "seed" sent by James I from his "owne store."[19] Production, too, may have been greater than the "taste" mentioned by Rolfe and the "samples" mentioned at one point in the Company records, for in answering some of the charges leveled against the Company administration of Virginia affairs in May 1623 it was stated that the settlers under the old government had "retorned from thence [Virginia] silke in some quantitie which was spunne in Sir Thomas Smiths Hall."[20] This silk, which was exported to England, very likely was sent out from Virginia in the form of cocoons ("Coddes") just as the worm had made them but after the chrysalis had been killed. It is possible, however, even quite likely, that the thread was reeled on to spools before it left the Colony.

The records do not tell us where in the Colony the officials built their early silkworm "house." It could very well have been at Jamestown where the first silkworms were reared in 1609 although it is possible that it could have been at one of the other settlements along the James. Since, however, this was a royally sponsored project and had the active support of the governors and since settlement had not spread far in the 1612-1614 period, it could very well have been at the seat of government which was now well

[16]*Records Va. Co.*, III, 74.
[17]*Records Va. Co.*, II, 396.
[18]*Records Va. Co.*, IV, 143.
[19]*Records Va. Co.*, III, 116.
[20]*Records Va. Co.*, IV, 143.

established—a good point at which it could be actively supervised by the responsible Company officials.

When the management of the Virginia Company shifted in 1618 from the Sir Thomas Smith to the Sir Edwin Sandys group, there was a renewed interest in, and effort toward, the diversification of the economic base of the colony. New emphasis was placed on the production of wine, the growing of hemp, the manufacture of pitch and tar, the production of glass, and related activities. The production of raw silk was another of these that was high on the list of required activities. For this raw silk, as in the case of many items for which Virginia was considered ideal, England was dependent on her European rivals. This was thought to be an undesirable and an unacceptable permanent solution. Consequently in 1619 we find a greater emphasis being placed on these needed commodities within the colony of Virginia.[21]

The General Assembly which convened at Jamestown in July and August 1619, the first representative legislative assembly in the New World, entered the picture by attempting to stimulate the increase of mulberry trees thereby insuring the food supply for the silk project. Even before this, John Pory, who arrived in Virginia in April 1619, expressed in June a keen interest in promoting silk culture in the Colony. Six months later, in another letter to Sir Edwin Sandys, he requested that "Vignerons" (wine dressers), skilled in the breeding of silkworms, such as were found in the "lowe countries especially Cambray & Landrechis" be found and sent to Virginia. In the instructions, dated September 4 of that year, issued for the settlement of Berkeley Hundred, specific mention was made of "mulberry trees for nourishing of silke wormes." It has been stated, too, that John Berkeley the following year brought several Frenchmen to Virginia to capitalize on this resource.[22]

In a note on the shipping, men, and provisions sent to Virginia in 1619 it is recorded that: "For the settinge upp of which Comoditie [Silk], his Maiestie [James I] hath beene gratiouslie pleased now the second time (the

[21]Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860* (Washington, 1933), I, 16. "The rich Furres, Caviary, and Cordage, which we draw from *Russia* with so great difficulty, are to be had in *Virginia*, and the parts adioyning, with ease and plenty. The Masts, Planckes, and Boords, the Pitch and Tarre, the Pot-ashes and Sope-ashes, the Hempe and Flaxe . . . from *Norway, Denmarke, Poland*, and *Germany*. . . . The *Iron*, which hath so wasted our *English* Woods. . . . The Wines, Fruite, and Salt of *France* and *Spaine*; The Silkes of *Persia* and *Italie*, will be found also in *Virginia*, and in no kinde of worth inferiour." (*Records Va. Co.*, III, 308-309).

[22]Tyler, *Narratives of Early Virginia*, pp. 264-265; *VMHB*, X, 285, 289-290; *Records Va. Co.*, III, 208, 254; *Tyler's Quarterly Historical and Genealogical Magazine*, I, 56.

former haveinge miscarryed) to bestowe uppon the Company plenty of Silkewormes seed." This seed was from the King's "owne store, being the best to be had; which together with such other as from other places we could procure" was sent in the *Duty* "at a seasonable time of year." It had been specified that this be "dispersed amongst the Colony, with the order for the using thereof; and especially to keep the Wormes from the aire of Tobacco, which is mortal to them." It was noted on May 17, 1620, that "divers skilfull *Vignerons*" had already been sent to Virginia and "some now are sent."[23]

In the summer of 1620 John Pory, again writing from "James Citty," was convinced that "Silke is a marvellous hopefull comodity in this Country." The Company, too, seemingly intended to assure its success. It acted to require all persons obtaining "*Patents* or Indentures of *Grants* of Lands" to "covenant to employ their people in great part in Staple Commodities" including silk.[24]

At a court meeting in July, the Virginia Company gave more attention to "Staple Commodities" and, in addition to the general committees which were to push the project, named special persons to advance "some several parts" of the program. Silk, olives, and wines were selected for special attention at the hands of Abraham Chamberlin and Richard Wiseman. A first endeavor was to be the location and organization of a "great store of Silkeworme seed aboute Michaellmas" and the finding of "men skillful in the orderinge of the Wormes and their Silke" to be sent out in a pinnace in October. Later, in September, there was thought of sending the seed by Dr. Lawrence Bohun, who was then thinking of leaving for Virginia in October. He sailed, as he had planned, yet it appears that the seed which he took "miscarryed."[25]

The minutes for the Quarter Court of the Company which met on November 15, 1620, revealed that "certaine Instructions were sent in writinge" in the *Bona Nova*, a ship that left England in November and reached Virginia about two months later. These instructions dealt with the planting of mulberries and the construction of "fitt roomes for the Silkewormes." Sir

[23]*Records Va. Co.*, I, 67, 353; III, 116, 261, 279. Included in the cargo of the *London Merchant* which went out from England in March 1620 was "one pound of worm seed." Perhaps these were silkworm eggs.

[24]*Records Va. Co.*, III, 303, 360.

[25]*Records Va. Co.*, I, 392-393, 490, and III, 314-315, 407; R. A. Brock, ed., *Abstract of the Proceedings of the Virginia Company of London 1619-1624* (in *Collections of the Virginia Historical Society*, New Series), I, 84. This is the same Dr. Bohun who some ten years earlier was collecting plants and herbs on Jamestown Island to determine their medicinal value in one of the very earliest chapters of medical experimentation in the Virginia Colony.

Edwin Sandys described this as having been "exceedinglie well done." He added that a French book on the same subject had been recommended to him and he moved, and the Court approved, that this be translated into English and "a good number" printed for dispatch to Virginia and "ther dispersed amongst the Planters soe as everie houshold might have one." It was approved, too, that the book carry a listing of the rates that would be paid to the "Planters" for the specified staple commodities.[26]

In December it was reported that the first part of this volume "was now allmost fynished as likewise the valuacon of the severall Comodities to be had in Virginia." The book would be ready for the printer in a few days. Copies of this, *Observations to be Followed, for the making of fit roomes, to keepe Silk-wormes in: As also, for the best Manner of planting of Mulbery trees to feed them,* are known to have been sent to Virginia in February 1621 probably reaching the Colony in June in the ship *Abigail*.[27]

Here was the beginning of a sizeable body of seventeenth-century literature on sericulture which embraced at least four distinct titles (exclusive of variations) devoted particularly to the subject in addition to a number of others which discussed it in part. John Bonoeil, "keeper of the Kinges Silkworms at Oatlandes," appears to have been responsible for this first tract published in 1620—at least for the translation of it. He was responsible, too, for the more complete volume of 1622 which included diagrams and engravings and carried his name on the title page. Bonoeil took an active part in, and expressed great hope in, the Virginia silk enterprise, expecting much from the work. In April 1621 the Company rewarded him for his continuing effort with two shares of "Land" and the appellation "free brother of the Company."[28]

S. W. Fletcher, in his "A History of Gardening in Virginia" has concluded that the earliest writings on the production of any crops in Virginia were on the subject of the production of silk.[29] To this might be added as well the cultivation of the mulberry tree which constituted a part of it and a beginning of horticultural activity in English America. The 1620 tract may have been the first such tract in Virginia in printed form. James I had called for a book of published instructions in January 1607 to encourage

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[26]Brown, *First Republic*, p. 410; *Records Va. Co.*, I, 94-95, 422.

[27]*Records Va. Co.*, I, 431-432; Brown, *First Republic*, p. 419. The volume mentioned here will, after this, be cited as Bonoeil, *Observations*.

[28]*Records Va. Co.*, I, 459, 470, and III, 63; D. J. Browne, *The Trees of America: Native and Foreign, Pictorially and Botanically Delineated, and Scientifically and Popularly Described* (New York, 1846), p. 45.

[29]A reprint from the *Proceedings of the Thirty-Seventh Annual Meeting of the Virginia Horticultural Society, December 6, 7, and 8, 1932*, p. 11.

the silk trade in England. It has not been established, however, whether this was prepared, or if done, whether copies of it reached the Colony. Copies of the 1620 volumes were sent and there is record that these and later volumes were in Virginia homes and in use.[30]

The publication of the book of instructions was not the only good news about silk late in 1620. It was reported to the Company that a "good store of Silkworme seed" had been received from France, Italy, and Spain and much more was expected "verie shortlie." There was still, however, a great shortage of men skilled in the business. Men from France were expected, due to the good work of Mr. Chamberlin. A more concrete result was the securing of a servant of Jasper Stallenge who had been employed for five years "in tendinge of the Kinges Silkewormes." He possessed the necessary skill in tending the worms and in winding their silk as well as skill in gardening. He agreed to go to Virginia for the remainder of his apprenticeship which had three years yet to run, and the Company agreed to his payment provided he instruct others in the Colony in this important work. It was further specified by the Company that the "old Planters" in Virginia who "had exceeded others in buildinge of fitt houses for Silkwormes and in plantinge Mulberie Trees and Vynes," as directed, should have first choice of the other apprentices to be sent "shortlie" as a reward for their efforts and an example to others.[31]

In its summary of achievements in 1620 the Company reported that the good store of seed from France, Italy, and Spain had been dispatched as had been instructions for the work. It specified, too, that eight "French *Vignerons*" had been "procured from *Languedock*" through the efforts of John Bonoeil and that they were men "very skilfull also in breeding of *Silke-wormes*, and making *Silke*." It was further related that "There are also some Englishmen sent that have been trayned up therein." Prices, too, had been fixed for the silk product—two shillings, six pence per pound for "Silke Coddes" (cocoons) and thirteen shillings, four pence per pound for "Raw Silke."[32]

It was quickly pointed out in Virginia that this pricing was a gross under evaluation in a locality where it cost three shillings per day "for the labors

[30]Green, ed., *Calendar of State Papers, Domestic Series, of the Reign of James I, 1603-1610*, p. 344; Samuel Hartlib, *Reformed Virginian Silk-Worm; or, a Rare and New Discovery of A Speedy Way, and Easie Means, Found Out by a Young Lady in England . . . For the Feeding of Silk-Worms in the Woods* (London, 1655), in Force, *Tracts and Other Papers*, III, Track No. 13, p. 27 (hereinafter cited as Hartlib, *Reformed Virginian Silk-Worm*); *The Lower Norfolk County Virginia Antiquary*, I, 122. William S. Powell, "Books in the Virginia Colony Before 1624," *The William and Mary Quarterly*, 3rd ser., V (April 1948), 179-180.

[31]*Records Va. Co.*, I, 99-100, 431-432.

[32]*Records Va. Co.*, III, 237, 240, 474.

of a man who hath no other waie but to digg and dealve." It was emphasized very forceably that Virginia was not a populous country and there were no great numbers of women and children, and labor was not cheap as in Italy, Spain, and France. In the "silk season" men were not to be had "at any rate" for the time was the "busiest about our corne."[33]

It appears that the "seed" mentioned so hopefully in December 1620 was dispatched in the *Margaret and John*, a 150-ton ship which reached Virginia in April. They were in the care of Jasper Stallenge's servant, but "the silk worms' seed miscarried" in shipment, pointing up the warning given in the instructions published late in 1620: ". . . there is great danger in carrying of the Silk-wormes seed, so long a journey by Sea to *Virginia*. For the sea is much contrary to the nature of the Silk-worme seed, and easily corrupts it, by reason of the moysture, and cold and rawnesse, especially carried in winter time."[34] It may not have been the cold and moisture in this case, however, for there is indication that the seed may have hatched enroute with the worms dying for lack of mulberry leaves.[35]

This disaster all but ended the hopes for silk in the spring season of 1621. George Thorpe wrote to Sir Edwin Sandys on May 15 that "The Silke-worme-seed is all perished savinge a verie smale quantitie sent mee in the supplie of Bristoll of which the Governor hath taken great care." This Thorpe hoped to bring to perfection, yet his plan was to "save it all for seede" for later use.[36] Captain Thomas Nuse, of Elizabeth City, was disappointed, too, since he had hoped to make a trial of it "though to my losse" since it "might have gyven the Companie satisfaccon." He went on to relate that "the people are now very much discouraged" in silk as well as in more basic things. He added, for example, that the Colony was in serious need of more "Cattle both for the plough and payle."[37]

Arrangements continued to be made in England, however, as the Company approved the publication of the second treatise on sericulture and mulberry trees, and in May 1621 Sir Edwin Sandys stated in the House of Commons that he hoped for as good silk in Virginia as was made in Persia. Early in May the contract with the Frenchmen from "Languedock," who had already taken passage for Virginia where they would plant vines and "order" silkworms, was sealed by the Company. It covered wages and al-

[33]Captain Thomas Nuse to Sir Edwin Sandys, a letter from Elizabeth City dated May 27, 1621, in *Records Va. Co.*, III, 457.
[34]Bonoeil, *Observations*, p. 18.
[35]Brown, *First Republic*, pp. 416-417; *Records Va. Co.*, IV, 15.
[36]*Records Va. Co.*, III, 447.
[37]*Records Va. Co.*, III, 457.

lowances. Instructions to Virginia in September urged that the colonists treat them well—that they "be kindly used and cherished." It was related that "divers provisions of vituals" as well as "Cloth to make them apparell," "hose and shooes," and such had been sent for them or should be supplied from the "Companies stock there."[38]

Steps were taken, too, in England, to locate a pinnace to carry the seed, now expected from Italy, France, and Spain, in September—"w[hi]ch Seed was allredie spoken for, and promised to be here against that time." It was requested by the Company that Mr. Chamberlin continue his efforts to get other seed especially from "Valentia" where the seed produced worms with more ability, it was said, to adjust to other climates. Thereupon he undertook to get six pounds of seed from this source.[39]

One instruction of note issued at this time was a curb on the wearing of "excess in Cloaths" in Virginia, and it was specified that only the "Council & heads of hundreds" could wear gold in their clothes or "Silk till they make it themselves." Instructions to Governor Sir Francis Wyatt in July 1621 required: "Next to corn, plant mulbery trees, and make silk, and take care of the Frenchmen . . . try silk grass . . . plant abundance of vines." He was reminded, too, that James I had "often" furnished seed for the Colony and that care and emphasis of this project was necessary. Trained men had been sent out and "many excellent bookes . . . unto w[hi]ch wee referr you for your better dyrection." On July 10 the Company expressed "verie great content to heare that som Staple Commodities, as Vines, and silke, began to be planted . . . and that they prospered with soe good success" as had been related in recent letters from Virginia.[40]

It was expected that the *Dutie,* which was to sail in October for Virginia, would carry a "store of Silke worme seed" and vines and the Colony was alerted to make advance preparations to accommodate some of both in each of the plantations. It was deplored that word had been received that both vines and mulberries had heretofore been "promiscuously defrayed."[41]

Delay in the shipment of the seed again ensued, however, and they left England late in November in the *Discovery.* Actually only a very small quantity of seed was dispatched instead of the abundance that had been

[38]Brown, *First Republic,* pp. 423, 429; *Records Va. Co.,* I, 466, and III, 502.

[39]*Records Va. Co.,* I, 483, 490, 510; Brock, *Abstract of the Proceedings of the Virginia Company of London,* I, 136-137.

[40]*VMHB,* XV, 31; William Hening, *Statutes at Large: Being a Collection of All the Laws of Virginia* (Richmond, Philadelphia, and New York, 1809-1823), I, 115; *Records Va. Co.,* I, 503-504, and III, 474.

[41]*Records Va. Co.,* III, 502. The *Dutie* evidently did not get away in September as had been planned originally.

expected until "Other things intervened." The new Bonoeil volume, authorized in the spring, was not yet complete and the "good number of the Said Bookes" could not yet be dispatched.[42]

In 1621 George Sandys, who was named "Treasurer in Virginia," was given other special duties. The Company "committed to his spetiall and extreordinaire care the execution of all our orders Charters and instructions tending to the setting upp, Encrease and maytaininge of the said Staple Comodities." This included special attention in the production of silk.[43] He may have been in part responsible for settling the "Frenchmen" who reached Virginia in 1621 at "Buck Roe" in the "Elizabeth Cittie" area under the care of Captain Nuse who was residing there. In any case it appears that the men from "Languedoc" took up their abode there although they were disappointed in not finding all the assistance, provision, and accommodation which they expected.[44]

Despite the loss of seed for the spring production in 1621, there was considerable hope when the Assembly convened in November and December of that year. It was related then that all were inclined to follow silk and that they were desirous of producing it. In letters sent from Virginia late in 1621 in the ship *George*, which reached England in March, it was stated that a "tast" of wine had been sent in the ship, and in regard to silk it was reported "that their hopes are nowe greater than ever [of] a flourishinge Country in a short time with that rich Comodity of Silke in respect the Frenchmen there do report the Mulbery Trees to be of the best kinde that are and do daylie encourage the people by their example to plant them in abundance, which make them all desire that Store of Silkwormeseed be sent them with the first conveniency.[45] Seemingly the Frenchmen considered that Virginia far excelled their own "Countrey of *Languedock*" in its potential to produce silk. The only need in the spring of May 1622 was said to be "hands"—sufficient skilled and unskilled labor.[46]

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[42]Neill, *Virginia Company*, pp. 263, 270; *Records Va. Co.*, I, 543; *VMHB*, XV, 32. Perhaps, the *Discovery* had been ordered, as had the *Warwick* in August, to deliver all goods, persons, provisions, etc., "at James Cittie in James River in the Kingedome of Virginia unto the Governor and Counsell of State residing there." The *Warwick* reached Jamestown on December 10. (*Records Va. Co.*, III, 498; H. R. McIlwaine, *Journals of the House of Burgesses of Virginia, 1619-1658/59* [Richmond, 1915], p. 17.)

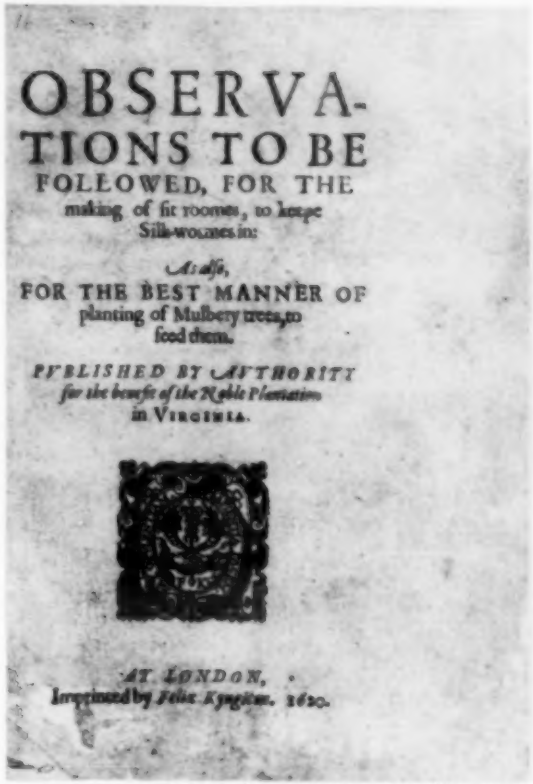
[43]*Records Va. Co.*, III, 471-472.

[44]*Records Va. Co.*, III, 463, 534-535. Among these Frenchmen were Anthony Bonnell, Elias la Guard, James Bonnell, Peter Arundell, and David Poole. (*William and Mary Quarterly*, 1st ser., IX, 86; Lyon G. Tyler, *Jamestown and James River, Cradle of the Republic* [Richmond, 1906], p. 246.)

[45]*Records Va. Co.*, I, 623.

[46]*Records Va. Co.*, III, 581, 586-587, 641, and IV, 522; *VMHB*, XV, 32-33; Edward Waterhouse, *A Declaration of the State of the Colony and Affairs in Virginia with a Relation of the Barbarous Massacre* (London, 1622), p. 10.

A veteran white mulberry (Morus alba) at Jamestown, Virginia



OBSERVA-
TIONS TO BE
FOLLOWED, FOR THE
making of fit roomes, to keepe
Silk-wormes in:

Alſo,

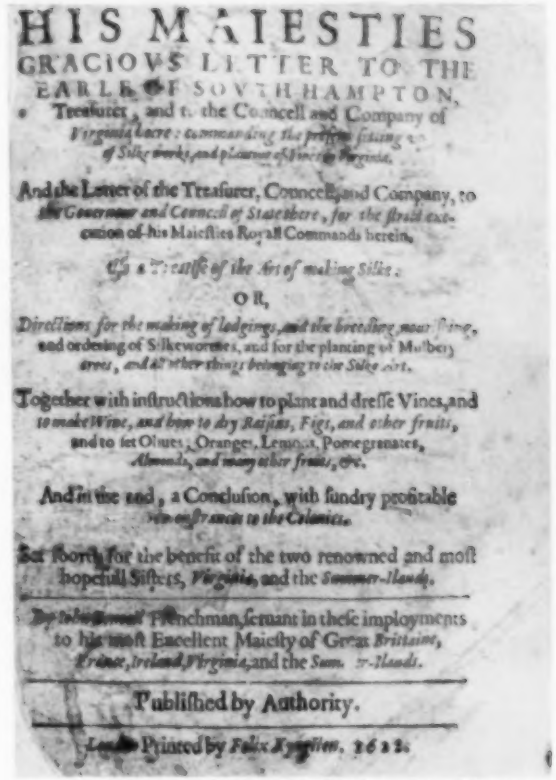
FOR THE BEST MANNER OF
planting of Mulbery trees, to
feed them.

PVBLISHED BY AVTHORITY
for the benefit of the Noble Plantation
in VIRGINIA.

AT LONDON,
Imprinted by *Felix Kyngſton.* 1620.

From a John Carter Brown Library copy

Title page of John Bonoeil's 1622 volume on sericulture



HIS MAIESTIES
GRACIOVS LETTER TO THE
EARLE OF SOVTHHAMPTON,
Treaſurer, and to the Councell and Company of
Virginia here: commanding the perfect ſetting vp
of Silke workes, and Plantacon of Vines in Virginia.

And the Letter of the Treaſurer, Councell, and Company, to
the Gouernour and Councell of State there, for the ſpeedy exe-
cution of his Maieſties Royall Commands herein.

Vp a Treatiſe of the Art of making Silke:

OR,

Directions for the making of lodgings, and the breeding, nourſing,
and ordering of Silkewormes, and for the planting of Mulbery
trees, and all other things belonging to the Silke Art.

Together with inſtructions how to plant and dreſſe Vines, and
to make Wine, and how to dry Raiſins, Figs, and other fruits,
and to ſet Olives, Oranges, Lemons, Pomegranates,
Almonds, and many other fruits, &c.

And in the end, a Concluſion, with ſundry profitable
obſeruances to the Colonies.

Set forth for the benefit of the two renowned and moſt
hopefull Siſters, *Virginia*, and the *Sommer-Ilands*.

By the meanes of a Frenchman, ſeruant in theſe imployments
to his moſt Excellent Maieſty of Great *Britaine*,
France, Ireland, Virginia, and the *Sum. r-Ilands.*

Publiſhed by Authority.

London Printed by *Felix Kyngſton.* 1622.

From a John Carter Brown Library copy

Title page from a volume dealing with sericulture which was published in 1620

James I undoubtedly received these reports with a good deal of pleasure. He was not, however, happy about the lack of sustained production, and on June 10, 1622, the Company wrote to the Governor and Council in Virginia that "His Majestie above all thinges requires from us a proofe of Silk, sharply reprovinge the neglect thereof." The Colony was urged that its little stock of worms be carefully improved. The Company then resolved to send "one hundred ounces of Silkeworm seed at least" before Christmas. In this letter it is recorded that the seed formerly expected from Valentia arrived in England too late for transshipment to Virginia and had to be hatched there. In June too, provisions were sent for the Frenchmen in Virginia, and the hope was expressed that they were training others in the Colony.[47]

On July 9, 1622, James I, in a letter to Company officials, personally directed attention to sericulture in Virginia:

> Whereas We understand, that the Soyle in Virginia naturally yeeldeth store of excellent Mulbery trees, We have taken into Our Princely consideration, the great benefit that may grow to the Adventurers and Planters, by the breed[ing] of Silkewormes, and setting up of Silkeworkes in those parts. And therefore of Our gracious Inclination to a designe of so much honour and advantage to the publike, Wee have thought good, as at sundry other times, so now more particularly to recommend it to your speciall care, hereby charging and requiring you to take speedy order, that our people there, use all possible diligence in breeding Silkewormes, and erecting Silkeworkes, and that they rather bestow their travell in compassing this rich and solid Commodity, then in that of Tobacco. . . .

The King went on to commend John Bonoeil and his volume on silkworms, mulberry trees, and vineyards and stated that he required that the colonists carefully put these instructions in practice "thorowout our Plantations there, that so the worke may goe on cheerfully, and receive no more interruptions nor delayes."[48]

The Virginia Company took this command and reprimand seriously and on the same day prepared a letter to the Governor and Council in Virginia. In this the Company stated that attention to silk and vines should be given high priority. Those who were negligent in planting vines and mulberry trees or in "the providing of convenient roomes for the breeding of Wormes," or who willfully refused to do these things were to be given "severe censures and punishment." It was further pointed out that "no Plea,

[47]Neill, *Virginia Company*, pp. 303-304; *Records Va. Co.*, III, 647, 651.
[48]*Records Va. Co.*, III, 662; Sainsbury, *Calendar of State Papers, Colonial Series, 1574-1660*, p. 31

either of difficulty or impossibility" would be honored. It was at this time too, that Bonoeil's volume with more detailed instructions was ready "to serve as an Instructour to every one." The Company dispatched a "store of them to be dispersed over the whole Colony, to every Master of a Family one."[49]

These volumes, together with eighty ounces of seed, left England in September reaching Virginia late in December 1622 in the *Abigail,* under Captain Samuel Each, the same ship that brought Lady Francis Wyatt to Jamestown. Although the seed sent in 1621 were damaged in shipment, these were reported to have arrived safely and to be "well conditioned, and shalbe carefully preserved." The massacre of March 22, 1622, had been for a time a serious blow to all such projects. In one case, that of Captain "Newce" (Nuse), it is reported that he had made all preparations "and the silke-Wormes [were] ready to be covered" but "all was lost . . . by the Massacre." This, insofar as silk is concerned, however, was but an interruption and work continued.[50]

In March 1623 George Sandys acted to require that every plantation impale two acres of ground and employ two men in vineyard work and "to build a large house of 2 storyes, well seiled, for silkworms."[51] The spring of 1623 was a busy season. There is little reason to suspect that anyone was discouraged by Alderman Johnston's charge that the Virginia mulberry trees "had a Prickle in them, which destroyed the silk-worms when they came to any Bigness." It was about this time that the Virginia Assembly, in reply to inquiries, had stressed that with "vines and mulburitrees groweinge wilde in great quantities" it was best that wine and silk be pursued as two of the most promising staple commodities. To promote these it was necessary that the Company "sende men over that are expert in those faculties."[52]

George Sandys, to protect the seed received in December, placed them all in the experienced hands of the "Frenchmen" and left them in their custody until the season was right for hatching which appears to have been in April. Late in March he wrote asking that John Bonoeil be solicited to locate "two Frenchmen" whom he wished to have sent to him, at his charge,

[49]*Records Va. Co.,* III, 663-664. Copies of the King's and the Company's letters were affixed and made a part of the Bonoeil volume (*Records Va. Co.,* II, 101-102).

[50]Brown, *First Republic,* p. 501; Brock, *Abstract of the Proceedings of the Virginia Company,* II, 149; Neill, *Virginia Company,* p. 372; *Records Va. Co.,* IV, 15.

[51]*Records Va. Co.,* IV, 24; Brown, *First Republic,* pp. 50-55.

[52]Arber, *Travels and Works of Smith,* II, 595; Tyler, *Narratives of Early Virginia,* p. 381; William Stith, *The History of the First Discovery and Settlement of Virginia* (Williamsburg, 1747), pp. 295-296; McIlwaine, *Journals of the House of Burgesses, 1619-1658/59,* pp. 38-39.

in Virginia.[53] He deplored the fact that there was a lack of interest in the project although he himself was pushing it. He reported that "the Vinerons are placed together at Elizabeth Citty & altogether imployed about silck-wormes, that we may preserve the seede & send you home som silck the next yeare." He pointed out, too, that the Frenchmen's time was up the next year and that they should be encouraged to stay in Virginia while others should be sent to augment their number.[54]

It was reported in April 1623 that Peter Arundell "hath taken very great paynes of late in erecting a silke house at his owne charge and in cherishing of silkewormes." He did this at "Buckrowe" in Elizabeth City, and it reduced his supply to a very small store of provisions, which, he said, was but "a bushell of Meale to keepe me and my familie from this tyme till Harvest." He added, too, in one of his letters that "All my Son in lawes corne was brought up to James Towne & I cannot gett a grayne of it to relieve my need though I produced a Bill of 18£ sterl which he owed me." He wrote on April 15 that there was a shortage of mulberry trees at Buckroe where they were not being preserved as they should be and the use of the leaves on those existing had caused a quarrel between Captain Whitaker's servant and Anthony Bonnell. As for his success he wrote "Our Wormes are well hatched & very hopefull: if I live I will bring home some silke." He relates, too, that various commanders had come to look over his new "silke workehouse" and that he had discovered some improved methods for "the easier hatching of the wormes." He mentioned, too, that his son, John Arundell, if any thing happened to him, would "follow the silke worke for I find him very fitt for it."[55]

The letters of the "French Vignerons, or Vine-men" were reported to be hopeful in the spring of 1623 "those Silke-wormes they have prosper exceeding well and some Silke they hope to send this yeare, there wanting nothing to set up that rich Commodity but store of hands wherewith England doth abound."[56]

While considerable activity was afoot in the Buckroe and Elizabeth City area, George Sandys then living at Jamestown also was undertaking to advance silk culture at Virginia's capital town. Since he was required to be in "almost dailie attendance at the Councell table" he was spending little

[53]Edward D. Neill, *Virginia Vetusta, During the Reign of James the First* (Albany, 1885), pp. 127-128; *Records Va. Co.*, IV, 24, 68.

[54]*Records Va. Co.*, IV, 108.

[55]*Records Va. Co.*, IV, 92, 230-231. John Arundell, along with William English, represented "The Lower Parts of Elizabeth City" in the Assembly of 1623. (McIlwaine, *Journals of House of Burgesses 1619-1658/59*, p. xiv).

[56]Waterhouse, *Declaration*, p. 10.

time at his plantation on the south side of the James River across from Jamestown. Rather, he had taken quarters in the home of Captain William Pierce at Jamestown where he "prepared the chamber where in I ly at Leiftenant Perses (the fairest in Virginia) for that purpose [raising silkworms]." It was here, too, that Sandys turned the Latin of *Ovid* into English verse.[57]

The residence of Pierce is believed to have been a new dwelling in 1623 and to have been located on the fringe of the "New Towne" to the rear of the presently standing ruins of the Ambler House. Pierce was captain in Governor Sir Francis Wyatt's guard and was, in 1623, named Lieutenant Governor and Commander of James City, the Island, and the blockhouses.

The Company in a letter to the Governor and Council on May 2, 1623, not knowing yet of these hopeful prospects, was much discouraged at the lack of progress in staple commodities. It was feared that unless visible progress (exports)—especially in iron, wines, and silk—was forthcoming that it would incur royal disfavor and the loss of the King's support. At this point Alderman Johnston's charges leveled at the failure in this respect did little to strengthen the Company claims. The question which was raised but for which no answer has been found, "whither the silkes shewed on Easter monday 1623 last to the K[ing] were not made in Engl," indicates that actual silk was being shown to substantiate the claims that Virginia could produce it.[58]

Once again on August 6, the Company wrote plainly to the officials in Virginia regarding the necessity for production results particularly in the matter of "Vines and Silk." They were reminded that the Company expected "some fruite as we hope to do this returne." Such proof was needed to silence the "Maligners of this Plantation" and to reassure the "well willers" who seem to "stagger in an uncertainty of belief, either of the Cuntries fittness for them, or of the sincerity of yours and our intentions for accomplishing of them." The Company called for continued effort, diligence, strict accounting, and the enforcement of rules including the penalties for individual failure. The Colony officials were urged to supply and take good care of the "Frenchmen" whose "times do shortly expire." Every effort was to be made to have them stay in Virginia permanently and if not permanently then long enough to train others to direct the work. The Company

[57]*Records Va. Co.*, IV, 68, 108; Charles W. Porter, III, "Historical Report on the Fort Eustis Tract, Fort Eustis, Virginia" (a National Park Service report, dated December 5, 1936, in the files of Colonial National Historical Park, Yorktown, Va.), p. 4; J. C. Hotten, ed., *The Original Lists of Persons . . . Who Went from Great Britain to the American Plantations 1600-1700* (New York, 1931), p. 174; *William and Mary Quarterly*, 1st ser., IX, 152, 270.

[58]*Records Va. Co.*, II, 396-397, and IV, 163, 211.

was not in a position financially to send others of similar skill, hence it was important that they be encouraged to stay.[59]

Just how much effect this sharp reprimand had is problematical. Five months later the report of the Virginia officials was general and evasive with reference to the ample proof which the Company wanted and needed. The massacre evidently did slow up, or halt, most of the staple commodity attempts, but the silk and wine projects were still considered active whereas things like the attempt to produce iron were at this time dead. Throughout 1624 there was emphasis on the increase and preservation of mulberry trees. Action was taken to require every freeman to fence ("ympale") a garden of from one-fourth to a full acre and to plant at least four mulberry trees and twenty vines.[60]

For the next few years records for detailed operations in Virginia are not as full as for the four previous years. It is difficult to follow the silk project which, although not very fruitful, seems to have been continued at least on an experimental basis. It is clear, for example, that George Sandys continued active in this. The census, taken early in 1625, reveals that he had "1 silkworm house and garden, and a vineyard of 2 acres," not at Jamestown where he had been raising silkworms in the spring of 1623, but at his plantation "Over the water," on the south side of the James River.[61]

The list of persons living in Virginia in 1624 and the census of 1625 indicate that not all of the "Frenchmen" who were sent to Virginia actually settled or remained in the Buckroe-Elizabeth City area. It is possible that some were at "Martin's hundred," "Indian thicket," "James Cittie," "Warnicke Squeak," and elsewhere. The implication is clear too that where these "Frenchmen" lived there were silkworms — at least for a time. If such was the case, as is indicated, then sericulture was attempted on a much wider scale than at the known locations of Jamestown, Surry County, and Elizabeth City. Little more is known of these activities while they were under the direction of the Virginia Company which was dissolved in 1624.[62]

In the 1618-1625 period considerable attention was paid to sericulture in Virginia with negligible results. A considerable amount of seed was hatched and worms were successfully grown. The amount of actual silk

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[59]*Records Va. Co.*, IV, 267-268.

[60]*Records Va. Co.*, IV, 452, 583; Hening, *Statutes*, I, 126; *VMHB*, XX, 156. Such regulations seemingly would have been effective throughout the Colony including Jamestown and the "New Towne" patents there.

[61]*VMHB*, VII, 264-267; Brown, *First Republic*, p. 626; A. W. Bohannon, "Jamestown Island and 'The Surry Side,'" *VMHB*, LV, 132.

[62]Hotten, *The Original Lists of Persons*, p. 222; J. B. Stoudt, *Nicholas Martiau: The Adventurous Hugenot* (Norristown, Pa., 1932), pp. 26-27.

produced, however, was not at all impressive. The effort in these years was but a continuation of that begun much earlier and there appears to have been no break in the work when the Company changed directors in 1618. Men, such as the servant of John Bonoeil, in Virginia for six years, 1615-1621, must have continued in their work despite the replacement of Company administrators.[63]

The dissolution of the Virginia Company did not end the hopes for staple commodities in Virginia particularly the production of silk. The Privy Council on October 24, 1625, sent word to the Governor and Council in Virginia that they should "use their best endevors, to bring" staple commodities "to perfection"—"Corne, Wine, Silke, Cotton, Salts, Salt-fish, Flax, Hempe, Indico, Woade, Madder, and the like." Governor Wyatt replied in the spring of 1626 that the country was growing populous and that such things would be given his attention "since all neither can nor must be suffered to Tend Tobacco." He then made the sensible proposal that a number of staple commodities be selected for serious attention rather than to scatter the effort so widely by grasping "all at once." But a "choice must be made," he wrote, "as wyne, silke, salt, fish and iron."[64]

In 1628 the Governor, this time John Harvey, was again instructed to give attention to the staples which included word "to plant mulbury trees, and to attend silke wormes." Earlier in the same year, in March, the Governor, Council, and Burgesses had written in reply to letters from the King in which they discussed the question of tobacco—"being at present their [the colonists] only means of subsistence." It is clear from this letter, and from other sources, that the Frenchmen brought in by the Virginia Company to cultivate wines and raise silkworms were (at least a number of them) still in Virginia. This gives too an answer for some of the lack of progress in their work for the letter relates that they "have purposely neglected or concealed their skill." This being the case, the lawmakers and the Governor asked that others be sent, and they made the proposal that "the

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[63]Bonoeil, *Art of Silk*, p. 22.

[64]W. L. Grant and James Munro, eds., *Acts of the Privy Council of England, Colonial Series* (Hereford, 1908-10), I, 93; Gray, *History of Agriculture in the Southern United States to 1860*, p. 184; Governor to Privy Council from "James Cittie," May 17, 1626, in *VMHB*, II, 53. Sir Francis Wyatt further proposed that "these are rather to bee referred to the industries of privat men, then the publique Stock to be expended uppon them." (*William and Mary Quarterly*, 2nd ser., VIII, 165-166.) Wyatt, also, wrote: "extirpating of the Salvages, winning of the Forest, encrease of cattle, swine &c building houses convenient for both seasons, planting gardens and orchards for delight and health setting vines and Mulberry trees for raising those two excellent comodities of wine and Silke, is worke enough for one seven yeares, and will employ our whole forces, and all contribucions of the well willers to this worthy Action." (*William and Mary Quarterly*, 2nd ser., VI, 118-119.)

colony would be glad to defray the charges of skillful men for that employment.[65]

It is not established whether, or not, a proposal made in 1630 was in any way connected with this request or whether or not anything came of the proposal. It had to do with a number of Protestant families in France and England who wished to settle in New England, or Virginia, to traffic in silk and other merchandise. Mention was made of available mulberry trees and pointed reference was made to "the river St. Jaques to the south of Virginia."[66]

Early in 1632 the Assembly took steps to discipline the Frenchmen who had been in Virginia for "about ten yeares" and had concealed their skills in sericulture. It was specified that they, and their families, were to be restrained and prohibited from planting tobacco, under penalty of the forfeiture of their leases and imprisonment, until they departed from the Colony. It is difficult to determine if this was enforced since data for these years seems to be too meager to tell us much of silk and wines if such were being seriously considered.[67]

A somewhat isolated reference in 1638 reveals that there may have been a short lapse in the prosecution of the silk work—a lapse, however, that was followed by concrete results. On January 18, 1639, Governor Harvey and the Council wrote to the Privy Council "Wee are againe beginning with silk worms for instance wee have humbly presented to his majestie a Quantity made this yeare [1638] in the country, which is transmitted to Mr. Secretary Windebank."[68] Harvey and the Council in a letter of the same date to Secretary Windebank described this as "the first fruits of their late endeavours."[69] Here again there is record of Virginia produced silk, some thirty years after the first attempt at Jamestown, being sent to England as proof that it could be produced in the Colony.

Additional records for this period are scanty. Sir Francis Wyatt, coming to Virginia for another term, was in 1639 ordered to see that white mulberries were planted. This was one of the earliest references to the intended use in Virginia of any but the native red mulberry tree. This instruction

[65]*Acts of the Privy Council*, I, 127-128; W. Noel Sainsbury, ed., *Calendar of States Papers, Colonial Series, 1574-1660*, (London, 1860), pp. 89-90.

[66]Sainsbury, *Calendar of State Papers, Colonial Series, 1574-1660*, p. 110.

[67]Hening, *Statutes*, I, 161. There is evidence that Elias la Guard, identified as one of the French Vignerons, was still living, in 1633, in Elizabeth City. (*William and Mary Quarterly*, 1st ser., XIII, 289.)

[68]"Virginia under Governor Harvey," *VMHB*, III, 34; Sainsbury, *Calendar of State Papers, Colonial Series, 1574-1660*, pp. 288-289.

[69]Sainsbury, *Calendar of State Papers, Colonial Series, 1574-1660*, pp. 288-289.

was coupled with the directive to "attend Silk Worms." In 1641 a 1636 act requiring the planting of vines and mulberry trees was repealed. Despite this Wyatt's instructions were repeated for Sir William Berkeley in 1642 — "every Plantation to plant a proportion of Vines, answerable to their numbers, and to plant white Mulberry Trees, and attend Silk Worms." How effective these instructions were remains a matter of conjecture. It may be that this was the beginning of Berkeley's intense interest in sericulture which reached a peak after his restoration to the Governor's office in 1660.[70]

One account of conditions in Virginia during the 1644-1656 period related that there was great progress even in the question of staple commodities with silk being specifically listed among them.[71] How much of this occurred before 1650 it is difficult to determine. There is more information, however, in a description of Virginia which appeared in 1649. This reveals a continuing interest and work in sericulture:

> And now they desire *Silk-wormes-seed* which is sent them, and their hopes are good of the thriving of it: A *Commodity* that may soon enrich them all with little labour, care or pains; all Materials so plentiful and at hand, the food in abundance, the Climate warm, and the work done in five weeks time, and within doors, by women and children as well as men, and at that time of the year in *May*, that it hinders not another work or planting, sowing or the like employments.[72]

To improve the economic aspects of the situation the original evaluation placed on silk and other staple commodities in 1621 had by this time been raised (with little success, it should be said) from fifty to three hundred percent.[73]

II

It was with mystery and almost reverence that the promoters of silk culture approached the silkworm:

> There is nothing in the world more proper then this curious atome of Nature the Silkeworme: to see this untaught Artist spin out of his transparent bowels, labour such a monument out of his owne intralls, as may be the shame, the blush of Artists, such a Robe that Solomon in all his glory might confesse the meanesse of his apparell, in relation to the workemen, cannot but bring them to admiration.[74]

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[70]*VMHB*, II, 287, IX, 57, and XI, 56.

[71]John Hammond, *Leah and Rachel, or the Two Fruitfull Sisters Virginia and Mary-Land* (London, 1656) in Force, *Tracts and Other Papers*, Vol. III, Tract No. 14, p. 9.

[72]*A Perfect Description of Virginia* (1649) in Force, *Tracts and Other Papers*, Vol. II, Tract No. 8, p. 6. Also, published in *Virginia Historical Register*, II, 65.

[73]Williams, *Virginia Valued*, p. 51.

[74]Edward Williams, *Virginia Richly and Truly Valued*, p. 38.

The insect so highly regarded in its mature form was a somewhat inconspicuous looking moth (*Bombyx mori*) of an ashy white color and hairy body with four almost transparent wings measuring about one and one-half inches across. In length it is, perhaps, less than an inch. Being a true moth its life cycle passes through the customary four stages of egg (seed), larva (caterpillar), pupa (chrysalis), and insect (moth). The seed are slate gray in color and very minute averaging some 40,000 to the ounce. When hatched, the caterpillar grows from its very small beginning into an ash gray, or cream colored, slenderish larva three to three and one-half inches long in a matter of some eight weeks with a greatly increasing appetite as the days pass.

Having reached its full development the caterpillar then spends some three days in spinning its 800 to 1,200 yards of silk around its body to form its nest, or cocoon, in which it lay for some ten to twelve days in the pupa state. With its transformation complete it then breaks from its cocoon as an adult moth. Mating takes place almost right away and then, in from four to six days, the female lays its eggs, upwards from 500, and soon dies —completing the life cycle in about eight weeks. This is the general pattern although there are variations, depending on the particular breed of the worm. There were even in the period under survey here many breeds since the silkworm had been raised, for the most part artificially, and had been watched carefully for particular traits and tendencies.[75]

It was around this life cycle that the activities of silk culture were built. It represented concentrated work in the spring months and left little time to the worker from the hatching of the seed until the cocoons had been reeled.

The seed of the silkworm had to be preserved during the period from one harvest to the next. They were placed in a box and left in a dry location which was always sufficiently cool (but above freezing) to prevent premature hatching. The hatching had to be controlled to coincide with the budding of the mulberry tree – "The Spring being come, and the Mulberries budding, it will be seasonable to put them to hatching." This was promoted in a number of ways "as the keeping them in a Boxe, in ones pocket, between a womans Breasts, &c."[76]

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[75]John Clarke, *A Treatise on the Mulberry Tree and Silkworm, and on the Production and Manufacture of Silk* (Philadelphia, 1839), pp. 224-225; *D'Homergue upon American Silk*, pp. 17-20.

[76]Edward Williams, *Virginia's Discovery of Silke-Wormes, with their benefits. And The Implanting of Mulberry Trees* (London, 1650), p. 18, (hereinafter cited as Williams, *Virginia's Discovery*); *D'Homergue upon American Silk*, pp. 109.

The most highly recommended method was to transfer the seed from the small to a somewhat larger box lined with cotton, or linen, not leaving them more than one-half inch deep. Over the seed was placed a piece of clean white paper perforated with small holes. On the paper were put choice young and tender mulberry leaves. Until hatching started some warmth was needed – both by day and by night. The box could be placed near the fire or heated with a pan every two hours, and at night placed in bed between pillows.

When hatched "the little and blackish Wormes" crawled through the holes in the paper and on to the leaves. When the leaves were full they were moved to a larger "Boxe or sieve" and new leaves were put in the "hatching box" to accommodate the worms left to come up. Hatching began within three or four days and continued for "seven or eyght dayes till all be hatched." It was important to place together all those coming out within a two or three day interval. At this point the worms needed to be fed daily and attempts were made to accustom them to the "coolenesse of the Spring." The weaker seed hatched later and if too late were rejected.[77]

In this way the silkworm began to develop. In the weeks that followed it grew into a fully developed caterpillar and in the process passed through four periods of inactivity, each lasting two or three days – "Foure times doth this excellent Artist change his skinne, which is the cause of his so many sicknesses." The first change, or moult, came in about twelve days and, as was true of later changes, was preceded by observable symptoms. When the sickness was past the worm changed color and moved on to the nearest leaves to feed. The succeeding changes occurred about eight days apart. The third change was thought to be more dangerous to the worm and at this time "cold ayres" could be deadly.[78]

With each stage more space, more food, and greater care seemingly were essential. When first hatched the worms from one ounce of seed required a space of some seven square feet, but after the final sickness this stood at some 184 square feet. One rule of thumb was that if the worms crowded each other fifteen minutes after getting fresh leaves, then it was necessary to transfer them to larger boxes, or shelves, and to "cast out the old leaves and their ordure."[79]

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[77]Bonoeil, *Art of Making Silk*, pp. 10-12; Williams, *Virginia's Discovery*, p. 18. Hartlib, *Reformed Virginian Silk-Worm*, pp. 6-7.

[78]Williams, *Virginia's Discovery*, pp. 19-20; Bonoeil, *Art of Making Silke*, p. 21; Hartlib, *Reformed Virginian Silk-Worm*, p. 7.

[79]Bonoeil, *Art of Making Silke*, pp. 17, 21; *D'Homergue upon American Silk*, pp. 102-103.

The collection of leaves and the feeding of the worms was a time consuming activity. As soon as the worms became active they needed to be fed twice a day a little at the time, then twice daily in greater quantity. Between the third and fourth sickness three times daily and after the fourth "as many [leaves] as they will eat." William Edwards wrote, in 1650, "At the beginning we go to gather leaves with Handkerchiefs, then with little baskets; lastly with sacks & maunds." The leaves, properly selected and dry, were simply placed on the worms and every two or three days all leaves were removed and the boxes, or shelves, cleaned well. Good quality leaves with no yellow spots, moisture, or imperfections were essential. If the leaves were poor then "One banquet of those gives the last repast that your Wormes shall have neede of. . . . The most agreeable to all Wormes is to bee fed with leaves of their owne age."[80] Bonoeil wrote that leaves from older trees should be kept until the "Wormes have passed their third and fourth sicknesse; for then it is, that they beget their silke; and the leaves of such old Trees beget more Silke than the yong ones."[81] In no case should the worm be treated to a type of mulberry leaf other than that on which he has been accustomed to feeding. In gathering leaves care should be exercised to prevent damage to the tree. Clipping or plucking "leafe after leafe" was preferable, yet this was "most expensefull." A faster method was "stripping them from the branches" but it was more damaging to the tree and over stripping and bruising was to be avoided.[82]

The 40,000 worms from one ounce of seed would require in their short life span more than 1,200 pounds of mulberry leaves — in the first stage, perhaps, 10 pounds; in the second, 20; in the third, 60; in the fourth, 180; and, after that some 1,000 pounds. To produce this quantity of leaves twenty trees (great and small) would suffice. The end result, within very approximate limits, was 150 pounds of cocoons (250 to the pound) yielding ten pounds of reeled silk. In 1655 it was estimated that this would sell for about ten pounds and that the labor of a man and boy would be able to tend all of the worms from six ounces of eggs until after the fourth sickness. At this point, it would be necessary to add three or four helpers for "the feeding and shifting of the Wormes."[83]

The silkworm was a sensitive and, in many ways, delicate insect and reacted sharply to disturbing environmental factors. A contemporary phras-

[80]Williams, *Virginia's Discovery*, pp. 20-21; Hartlib, *Reformed Virginian Silk-Worm*, pp. 7-8.
[81]Bonoeil, *Art of Making Silke*, pp. 31-32.
[82]Williams, *Virginia's Discovery*, pp. 3-5, 6-10.
[83]Bonoeil, *Art of Making Silke*, pp. 72-73; Hartlib, *Reformed Virginian Silk-Worm*, p. 17; *D'Homergue upon American Silke*, pp. 102-103; Loudon, *Arboretum*, III, 1356-1357.

ing of this same thought was made in 1650: "Spaciouseness, pleasure, healthfullnesse, distance from offensive vapours, damps and humidities, warmth in the extremes of colds, coolenesse in the extremes of warmth."[84] That sufficient space was recognized as a prime requirement is seen from this 1620 statement: "It is a thing well knowne, that a few Silk-wormes, fed at large, and ease, make farre more silke than a greater number, put in narrow and ill-favoured roomes."[85]

Excessive handling of the worms was injurious, especially in the early stages of development. Cleanliness was particularly important too, making it necessary to keep the boxes, or trays, scrupulously clean as well as the general surroundings. Clean and well "Washt" and scented hands were considered prerequisites for handling the worms and the smell of tobacco was thought deadly. "Tobacco . . . is exceedingly contrary and mortall to the Wormes; even the very breath of one that hath taken it, breathing upon them, will certainly kill them."[86] The damage done by dampness in the room and especially the feeding of wet or moldy leaves was underlined and constantly stressed. Feeding also had to be carefully watched to avoid "the too sparing, or too abundant, administrations of victualls" especially in times of the sicknesses.

Ventilation was important, and it was recommended that the wax in the candles used for lighting should have a pleasant odor. In addition it was recommended that "the Lampes should bee affixed on the wall, and bee portable lights." At times the worms needed bright light and again they needed soft, subdued light especially in the sicknesses. Some even thought that the fragile worms were "hurt by Thunder in Virginia," but the authorities rejected this.

Specific diseases of the worm were recognized and proper remedial measures were duly proposed. Despite this it appears that in many instances a sick worm became a dead one. The contagious nature of infection was recognized, and the prompt removal of a sick, or dead, worm was urged with vigor. With certain clearly marked symptoms the worm was of further service only as a means "to repast your Poultry."[87]

Experience counted for a great deal, but it was thought that "one skillful in the noble mystery" could teach a number under him. Five or six weeks

[84]Williams, *Virginia's Discovery*, p. 10.
[85]Bonoeil, *Observations*, p. 22.
[86]Bonoeil, *Art of Making Silke*, p. 10.
[87]Bonoeil, *Art of Making Silke*, pp. 5-10, 32; Williams, *Virginia's Discovery*, pp. 6-10, 21-24; Hartlib, *Reformed Virginian Silk-Worm*, pp. 7-8, 26; *D'Homergue upon American Silk*, pp. 117-127.

training by a master was considered a minimum. And the master with "arguments of honor and profit" was to be encouraged to impart his knowledge to those under him. Attention to the known rules was stressed for use in Virginia, however, careful observation and experimenting were considered essential – "We must not therefore conforme the nature of the Climate to our Rules, but our Rules to it." Both "Bookes and experience are needed."[88]

In the end the silkworms reached maturity. Some ten days after they "have attayned to their full bignesse of body" they "be readie to spin." It was observed that they would "run on the leaves without eating" and became "very light and cleare in their belly." A week before this stage was reached, preparations were required. Branches of trees or vines, small yet firm, were needed – branches of "Birchin boughes, Heath or Hather, Broome, cuttings of Vines," rosemary, chestnut, oak, elm, or ash. These branches, thoroughly dry and some fifteen inches tall, were then placed upright "the bigger end resting upon the lowest shelfe" and the small end resting against the "next upper shelfe or board" with twigs spread and arched as much as was possible. The bases were at least an inch and a half apart. The worms and fresh leaves were then placed in the shelf. Soon eating ceased and the worms were ready "to make their Silke." At this point they would "be clyming up, upon the boughs" where they could proceed to spin their cocoon. At this stage "you must cleane them very often, because they dung much." It was necessary to help some of the worms get on to the branches. In placing them there care to avoid crushing and to avoid contamination by unclean hands was important. Good ventilation was now imperative as well as sufficient heat which "comforts the Wormes." Heat came from ovens or from "fire in the Chimney of the roomes, or in a pan with wood coales well kindled first." The work of building the cocoon ("Cod," "silke-ball," "bottom") required about ten days, and while the spinning went on, it was reported that the worms made "a pleasant humming."[89]

The silkworm remained in its "Cod" for about ten days in the pupa state and then, if left unmolested, emerged as a fully developed "Butterfly,"

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[88]Williams, *Virginia Valued*, pp. 32-34.

In 1622 Bonoeil voiced the same words of wisdom: "Time and observation will teach you many experiments, out of which perhaps some more rules of art may be made, as best fitting in some particularities, the Countrie and Clymate of *Virginia*, which finding, after good triall made, you shall doe well to set them downe in writing, that in time they may be published also." (*Art of Making Silke*, pp. 74-75.)

[89]Bonoeil, *Art of Making Silke*, pp. 21-23; Williams, *Virginia Valued*, p. 34; Williams, *Virginia's Discovery*, pp. 24-26.

or moth. Before this occurred, however, it was necessary to select the cocoons to be set aside for seed production and to gather the remainder for immediate reeling or for treatment that would kill the chrysalis. If the moth were left to develop fully and to burst the cod, it rendered the silk fiber unreelable and of much less value.

The best "Silk balls" were reserved for seed purposes with the estimate in mind that 200 would produce about one ounce of eggs. The double, or triple balls (where several cods were joined), were often selected since the reeling of these was difficult. The selected cocoons could then be strung with "needle and thread" and hung on "nailes, or woodden pinnes." When the "Butterflies" came forth they were placed on a designated shelf "that the male and the female may couple together." While mated they were put on a cloth, preferably "the back side of old Velvet" ("never linen or paper on which eggs adhere too tightly"). Walnut leaves bunched together could be used if the people "be so poore, that they cannot get such stuffe." In about ten days the good, fertile eggs "became blackish" and could be scraped off the cloth, or leaves, "with a knife" and put in a box "very cleane, the sides close pasted with paper" to keep out air and dust. This small box was then ready to be put "in a chest, in a dry temperate place" – not too hot and not too cool – to await the next harvest.[90]

The greater part of the "Cods" was gathered for reeling into silk–this was the harvest, the "take" as one contemporary put it. The reeling, or the unwinding of the silk fiber from the cocoon, was best done immediately. "It is best to spinne the silke from off the bottomes before they turne to bee Butterflies" since the "Gumme" binding the cocoon together would not be set. Such was not practicable in most instances, however, because of the time element. Consequently in most instances the chrysalis was killed to prevent damage to the "Cod." This was done in several ways. It could be effected by the exposure of the bottoms to the hot mid-day sun and then smothering in cloth. Then, too, they could be placed on boards in a hot oven "After you have drawn your bread from the Oven" or after it has been heated for the purpose and "all embers" removed. Here it was necessary to be careful not to burn the silk or to cause it to be "too much dried up."

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[90]Bonoeil, *Art of Making Silke*, pp. 24-26. In selecting "Cods" care to get the correct proportions of male and female bottoms was essential. The former was long and slender and a bit sharp at one end. The latter was large, softer, round at one end and pointed at the other. Tests of good seed included crushing on the nail when sound eggs would cast "forth humor and moisture." Then, too, in "generous wine" the good seed would sink and the poor would float.

Perhaps the preferred method was to take "great Cauldrons or Coppers, such as Diers [or "Brewers"] use," fill them half full of water, and build a fire in the "furnace" to heat the water. Then within each "Cauldron" place a "round lid or cover of planke and boord" perforated like a "Sive" or "Cullender" within four fingers bredth" of the water. The cocoons were placed on this platform on a "Carpet of Darnix" and then the cauldron covered with its lid. The resulting heat and steam killed the pupa and left the silk fiber with no color damage and easy to spin. When removed from the pot it was necessary to place the cocoons in the air to "dry their moysture."[91]

The final step was to sort and grade the cocoons and then to reel off the silk fiber from each combining a number (five or six) to form a continuous, uniform, and regular thread of "raw silk" which was then ready for use in the fabrication of silk products. In preparing the cods for reeling it was necessary to soften the "Gumme" cementing the cocoon together and this was usually done in heated water in which, for stubborn bottoms, some "sope-boylers lye or liquor," "Gumme Arabick," or wood ashes, had been dissolved. This reeling was laborious and time consuming although thought to be simple enough for children to do.[92]

The "pierced" bottoms, those broken by the emerging Butterfly, were salvaged although they could not be reeled and made only coarse silk. These were put in a "Caldron" in soapy water and boiled. They were then taken out and washed and "beat . . . with a round staffe of a good bignesse upon a stone or some block" until white and smooth. Then, pulled one from another and opened, they were ready to be "put on a Distaffe and spunne as small as you can, or please."[93]

The *Bombyx mori* was the moth that was the basis of sericulture in Virginia, however, it was known that other moths, also, produced a fibrous substance in spinning their cocoons. This was a form of silk too, yet it was seldom used for manufacturing purposes. Such was sought and found in Virginia and some of the colonists did make a "triall of the Naturall Silkworme." They were urged from England, particularly about the middle of the seventeenth century, to do more in his direction. This, perhaps in part at least, explains the often mentioned comment that Virginia was a place "where the Mulbery and the Worme are aboriginall."[94]

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[91]Bonoeil, *Art of Making Silke*, pp. 27-29; Williams, *Virginia's Discovery*, pp. 28-29.

[92]Hartlib, *Reformed Virginian Silk-Worm*, p. 28. Lead basins, or cauldrons, were, in 1650, thought better for this than copper since "this Metall . . . [is] subject to a rubiginous quality, from which Lead is wholly exempt." Heat from a "charcoale" fire was thought more pure since it gave no smoke.

[93]Williams, *Virginia's Discovery*, pp. 29-31.

[94]Williams, *Virginia's Discovery*, p. 31; Hartlib, *Reformed Virginian Silk-Worm*, pp. 22-23, 27.

III

In the successful prosecution of sericulture it was recognized at the outset that there were two important factors that must be assured—"First, the making of lodgings for the Silk-wormes: Secondly, the abundant planting of the best Mulbery trees . . . to have the best leafe to feed the Wormes."[95] In Virginia shelter was, perhaps, the more important of the two, certainly in the beginning, since for food there was the native mulberry growing wild in some abundance.

To insure prompt attention to these matters abbreviated instructions were sent to the colony by the Virginia Company in 1620, and these were followed in 1622 by more detailed and more carefully prepared directions. In the years that followed, these were further implemented. In 1620 it was specifically stated that the Colonists should: "first . . . make the lodgings and room for the Silk-wormes, so commodiously and conveniently for them, as they may easily do their worke, to yeild you abundance of silke which is but a vaine hope, if you lodge them in a place unproper, and contrary to their nature. The Chambers for to lodge and bring up the Silk-wormes in, must bee made spacious lightsome, pleasant, neate, and wholesome, farre from ill sents, damps, fogs, and humidities: warme in cold, and cold in hot weather."[96]

Suitable lodgings could be of two types, both of which were known to have been used in Virginia. Accommodations could be arranged within a regular residence such as George Sandys had at Jamestown, or there could be a separate house for the purpose such as Sandys had at his plantation across the river from Jamestown.[97] The former method was emphasized since housing was a problem and the space needed for "two months only in the Spring," could, for the remainder of the year, be used for other purposes. Space requirements, it was outlined, should be on the basis of a room 42 feet long, 18 feet wide, and 12 feet high to accommodate "The Silk-wormes comming of tenn ounces of seed."

In selecting space in a residence, or in a building not used exclusively for silk culture, it was important to locate it away from the ground to avoid moisture and to see that it was not too near the roof where there might be excessive heat in hot weather. In a three story building, for example, the second floor was the most ideal. It was possible, however, to adapt a one story building. In this case it was important that the "floore be dry and

[95]Boncœil, *Observations*, p. 3.
[96]Boncœil, *Observations*, p. 4.
[97]Boncœil, *Observations*, pp. 4-5.

Courtesy of the John Carter Brown Library

The Silkworm "Butterflies" and "cods"
A 1622 Interpretation

Courtesy of the John Carter Brown Library

Feeding the Worms – A 1622 Interpretation

boorded." In addition the ceiling had best be "close boorded" as well. In no case should the worms be kept close to "the tiles" of the roof, which if close "are alwayes hurtfull to them, because that the winde and the cold pierceth thorow them, and the heat of the Sunne is there also insupportable, when it lights upon the roofe in his full force."[98]

The feeding rooms, it was specified in 1620, "must have casement windowes to open and shut on both sides of the roome, being opposite one against another, from East to West, or from the North to the South" to promote good ventilation as needed. It was added that "you must take heed, that the windows to open and shut bee well glazed or papered, and made to shut so close in a cold season, that no cold ayre get in at them."[99] It was important that the windows be detachable and that the openings be hung with "nets" to "Keepe out poultry, and birds, which may fly in and eate the Wormes" when the windows were open and unprotected.

Silkworms were thought to "desire to be in a light place as not willingly abiding the dark." In addition to good windows it was recommended that the walls of the rooms should be "smoothly whited on the inside." The smooth walls would also tend to discourage the movement of rats, a serious threat to the worms. It was primarily for this reason it seems that "Thatched roofes" were felt to be quite unsatisfactory "because they harbour Mice and Rats, which are great devourers of the Wormes." It was further pointed out that "All chinkes, crevices, and holes, most be close stopped, that there be no place of retrayt left, for Mice, Rats, Lizards, Crickets, or other vermine, enemies to our Silkwormes."[100] Materials for this were cited to be present in form of "Lome, Clay, and Lime."[101]

John Bonoeil in 1622 gave more explicit instructions for the construction of a house devoted entirely to the silk work. These were in general similar to the directions of two years before. Casement windows, however, were not specified as will be seen from the description:

> Chuse a place in good ayre, neere the Mulberry trees, and there build a long house, in forme of a Bowling Alley, covered over, but a little higher and somewhat larger. They must cover it well, either with tiles, plankes, or other things, against the heate and raine, for the preservation of the Wormes. And the sides of the walles must be well closed either with plaster, plankes or other matter. In these walles, make many

[98]Bonoeil, *Observations*, pp. 4-5.

[99]Bonoeil, *Observations*, p. 6. For the type of casement window seemingly intended see the contemporary engraving given facing p. 33. This was one of the illustrative drawings sent to Virginia to guide the settlers in their construction activities.

[100]Bonoeil, *Observations*, p. 6. In 1650 it was recommended as desirable "to parget or plaster the inside of the house very well and smooth." (Williams, *Virginia's Discovery*, p. 11.)

[101]Bonoeil, *Art of Making Silke*, pp. 77-78; Williams, *Virginia Valued*, pp. 36-37.

windowes on both sides of the house: Let the windowes be of wood, to open and shut, and to give ayre to the Wormes, whensoever they need it. . . . These windowes may be covered with paper, which windowes may be set on or taken off the hinges when need is . . . beware also, that the paper of the windowes bee not oyled.[102]

Bonoeil pointed out that when silk "lodgings" were a bit isolated, it was important to make necessary provision in them "to lodge your selves, from the beginning, to the end of your Silk-harvest time." It was noted that Virginia abounded with "Choyce Materials, to erect these Silke-lodgings with, which will cost you nothing, but a little labour, to cut out some posts, and to fit them and set them up; or to sawe out small quarter, and rafters, and planckes, and boards, to fence the sides instead of walles, and to cover the roofe instead of tiles."[103]

This information was repeated in the instructions of 1650, when further comment was made to the effect that there was an "abundance of Woods, which will runne out, slit, and cleane into long lengths and breadths, which by the directnesse of the Ground will rive in a manner, as if they had beene sawne for the worke. All which must be so close layd, joyned, and nayled together, the one still lapt over the other, that no Wind or Raine may penetrate therein to offend that laborious Creature." It was suggested, too, that "Indian Mats" could be used to good advantage to keep out wind and rain. Where the "lodgings" and living accommodations were built, for convenience, in the Mulberry groves away from a main settled area it would be possible, it was explained, to keep them together "set end and end" and "cast into the forme of a Fort which pallisadoed, and . . . sentinelled by halfe a dozen of good Dogges, wilbe sufficient defence against all the Natives."[104]

It was thought important "to make a partition in one end of the house, and to board that corner so parted with boards," as a special area in which to cool, or dry, the mulberry leaves after they had been gathered. There would be two doors in this room with one leading into the area where the worms were kept and one leading to the outside.[105]

It was mentioned in the early instructions, and emphasized in those prepared in mid-seventeenth century that "lodgings" did not, of necessity,

[102]Bonoeil, *Art of Making Silke*, pp. 5-6.

[103]Bonoeil, *Art of Making Silke*, pp. 77-78. Bonoeil also suggested that those tending the worms might want to have with them near the "lodging" some poultry, swine, and cows and to maintain a garden for their own convenience.

The abundance of building materials available in Virginia was stressed in most of the silk culture instructions that were sent to the colony. (Williams, *Virginia's Discovery*, p. 10.)

[104]Williams, *Virginia's Discovery*, pp. 36-37.

[105]*Ibid.*

have to be complex and expensive. It was related that in some countries the people of small means brought the worms "to lodge them in that Roome which is their Kitchin, their Chamber, their all." Sometimes the worms were raised in a simple "dry cabinet of Boords," after the manner of Sicily. In 1655 it was pointed out that even the Indian type of house built with "Poles Arbor-wise, and covered top and sides with mats" would be suitable for silk culture.[106]

Irrespective of the type of "lodgings" employed, one feature was essential, —tables or scaffolds. These were frames in which the worms were kept from the time the "seed" was hatched until the cocoon had been spun. In 1622 they were described as:

> . . . a certaine frame of wood, with boords or little Tables, one stage or story still above another, every one of which stages of tables or shelves must be distant from one another one foote and a halfe, or thereabout, and in every frame, there may bee five or sixe stories or roomes of shelves, according to the height of the room of the house, all of one distance one from the other.[107]

It was important that the first shelf, or table, within the tier be at least three feet from the floor and that the topmost one be some three feet from the roof. For convenience in feeding the worms, it was specified that they should be no deeper than four feet. These scaffolds were correctly located when they were in the center area of the room and not placed flush against the wall. This was a measure against vermin as well as a measure to promote ease of operations. The "bordsor shelves" for placement in the frames were to be built of "firre" or of wood that did not leave a strong smell. Indian mats were recommended as better than wood shelving since they were porous and would allow a circulation of air. Because of their flexibility, however, it was important, in the event that they were used, to support them with "crosse Ioices of boord" or to use "Cord put thorow the bored holes of the sides of the frame, as bedcords in a bedsted."[108] Several sets of scaffolds could be set against each other if the size of the room allowed. It was necessary that the scaffolds be sturdy to support the weight of the worms and to accommodate the "ladder which the Keeper ascends," or the gallery, a "little stairs" of boards.[109]

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[106]Bonoeil, *Art of Making Silke*, p. 8; Hartlib, *Reformed Virginian Silk-Worm*, p. 17.

[107]Bonoeil, *Art of Making Silke*, pp. 8-10. In 1650 these scaffolds were described as "square Pillars or Carpenters," erected perpendicularly from ground to ceiling. The tables crossed the pillars and were supported by joints. Each table was four inches less in width than that under it, resulting in a "Pyramidicall forme." (Williams, *Virginia's Discovery*, pp. 11-12.)

[108]Bonoeil, *Art of Making Silke*, pp. 8-10.

[109]Williams, *Virginia's Discovery*, pp. 11-12. Cedar and cypress were recommended as light woods suitable for ladders in Virginia.

As an aid to Virginia workmen, diagrams were furnished to aid in the construction of scaffolds.[110] These frames needed to be rugged, yet it was emphasized that they were easily built in large or small "lodgings" and they could be of permanent or temporary construction. In fact, when necessary, they could be in a sense portable. When needed they could be assembled and when not in use they could be taken apart and stored thereby freeing the space which they had occupied. Before assembly, however, it was important that they be washed well and rubbed with "sweete smelling hearbes, as with Rosemary, Time, Fennell or such like." In no case should they be contaminated with tobacco, a substance considered deadly to the worms.[111]

As in the case of housing, so in the case of scaffolds an attempt was made in the mid-seventeenth century to simplify construction. This, perhaps, was an effort to make silk-culture more attractive to more persons. Colonists were urged to "take your Reeds and small Canes in *Virginia*, and run but a strung needle and thread thorow the Reeds which will hold them together, and so you may presently make shelves and tables." The lack of emphasis on equipment reached a peak, perhaps, in 1655 when culture in the open on the trees was proposed. It was obvious, however, that the authors of these instructions were not as familiar with spring months in Virginia as they should have been. There was, on the other hand, quite possibly an element of truth in the observation that "the books are too superstitious and ceremonious in the rules which are many that they give concerning the ordering of the worm, which are not so necessary as they pretend."[112]

From the beginning the susceptibility of the silkworm to moisture and cold was recognized, and it is not unexpected that men sought to make provisions to control this. As early as 1622 detailed descriptions for furnaces, or "Hot-houses" were included in the instructions and specifically recommended for use in Virginia. This was a somewhat unusual device as the lucid description written by John Bonoeil will show. In a small, or average size, house one such furnace was enough. In a large house, however, one was recommended for each end:

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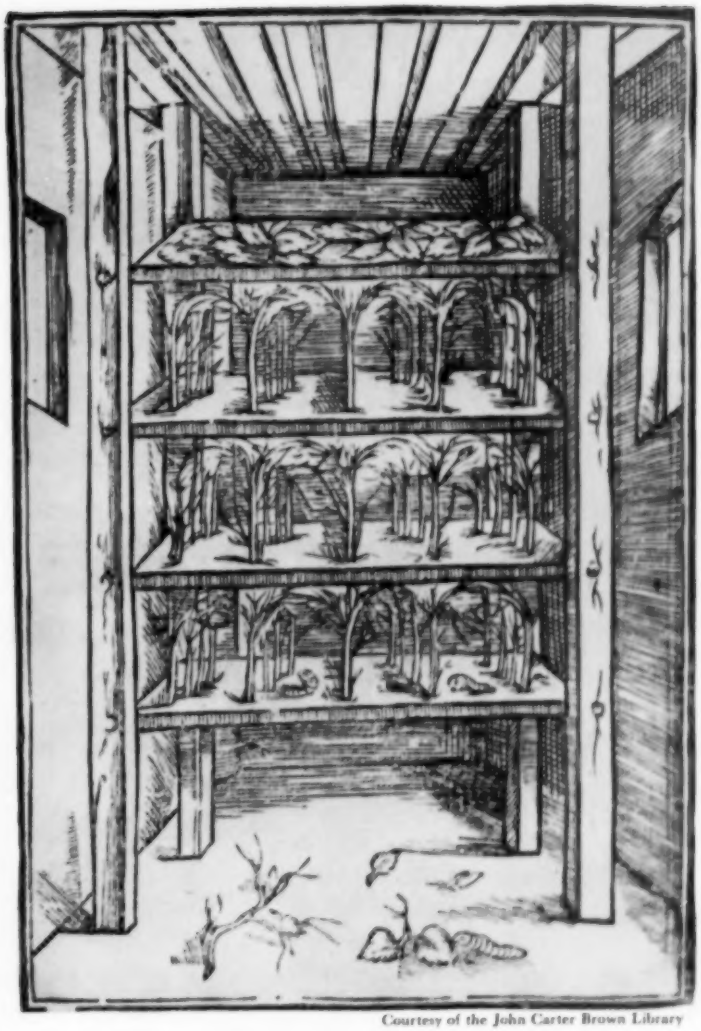
[110]See plates facing pp. 33 and 36.

[111]Bonoeil, *Art of Making Silke*, p. 10. A refinement of the scaffold devise was described in 1650: "But the most assured way to preserve the Wormes untill their second change is warmth and security from Vermine, dust, or other hostilities of nature, is by a Great Presse or Cubboard made with many stages, pargetted or posted for the agreeablenesse of the odour with Oxe dung, made of firre, or mats, and to draw out at will separately, equally distant foure inches, compassed round about within Linnen tackt to the doors, with paper windowes on the sides and foremost doore, to admit or exclude aire after the exigency of the occasion; and heere vacant places being left at first to enlarge them, as they increase in growth may they bee distinguished according to the Dates of their first appearance on the Mulberry." (Williams, *Virginia's Discovery*, p. 19.)

[112]Hartlib, *Reformed Virginian Silk-Worm*, pp. 16-17.



Courtesy of the John Carter Brown Library

Accommodations of the Spinning. A 1622 Sketch

Courtesy of the John Carter Brown Library

Winding Silk Illustrated (1622)

> And it must be built in this forme . . . First, a hole should be made in the house wall, wherein you build your Hot-house or oven, and therein build up, as it were an Oven, after the manner of the Countrey Oven. The Ovens mouth must be at the outside of the house, with a little Chimney to it, and the back of the Oven, within the inside of the house. Then you must have earthen pots, like Flower pots, without holes in the bottomes, and scarce so big as they, which must be made purposely so as they may be able to abide the fire: These pots must be placed with a distant proportion of space, betweene pot and pot, and so build them in, within the vault of the said Oven, with brick and clay; the mouth of the said pots must stand out at the backe of the Oven, and looke into the inside of the house, but the bottomes of the pots must stand and looke towards the fire, within the inside of the Oven: and in this manner must the pots be incorporated within the Oven. After this done, you may make fire in the Oven when neede shall bee; for the pots being hot, will thereby cast a heate out, and warme all the house, and the smoke gets out of the chimney of the Oven's mouth, at the outside of the house. . . . These Ovens or Stoves will bee very usefull in Virginia, principally in those Silke-worme-houses which shall be built amongst the Woods, where store of Mulbery trees grow.[113]

As an added improvement to the health and contentment of the worms, it was recommended that branches of "Rosemary, Time, Roses, Juniper, etc." be put into the pots where the heat would cause their fragrance to permeate the room.[114]

Another item of equipment needed in the house was a wheel to facilitate the winding of the silk from the "cods." This was described in some detail and, fortunately, was depicted in an engraving designed to show "the fashion of the Engine, how to wind off the take from the cods, with the furnaces and cawtherns for that purpose."[115] This device was composed of a stove which was the source of heat for a container in which the "cods" were immersed in water. A skilled operator then manipulated the silk fiber from each cocoon and fed it in the proper amount through a twisting device which in turn fed the thread on to a reel which was rotated by an assistant operator.[116]

This then was a well appointed "silk-house"—a properly designed and constructed house which included space for the silk worms and the handling of mulberry leaves; proper scaffolds with tables, a heating unit, and a mech-

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[113]Bonoeil, *Art of Making Silke*, pp. 6-8.

[114]Williams in 1650 repeated in some detail essentially the same description as Bonoeil.

[115]See plate facing p. 37.

[116]A verbal description can be found in Williams, *Virginia's Discovery*, pp. 29-31. In 1655 it was stated that "The Making of a wheel" was difficult to describe and understand. Consequently the conclusion had been reached to send to the Colony as soon as it was possible "a wheel ready made, and a man that shall instruct all such as are desirous to learn the use thereof." In the meanwhile the silk growers were to do the best that they could on the basis of instructions already given. (Hartlib, *Reformed Virginian Silk-Worm*, p. 9.)

anism for reeling silk. All was to be operated by skilled attendants and helpers.

IV

The initial reason for silk culture in Virginia stemmed from the discovery of a considerable quantity of mulberry trees growing in a native state. One of the reasons for the failure of silk production in England had been a lack of such trees, consequently greater attention was focused on Virginia and later on the other American colonies.[117] It was soon recognized, however, that even with the numerous free growing trees in the Colony that an adequate supply of trees to provide enough leaves to sustain a prosperous silk production would require systematic cultivation. To this end the colonists were instructed in the best known methods of obtaining, growing, and using the mulberry and considerable interest developed in preserving and planting the tree. It is worthy of note that those burgesses who convened at Jamestown in late July and early August 1619, in what was the first representative legislative assembly in the New World, acted to protect and increase the supply of available mulberry trees to the end that silk culture might succeed:

> About the Plantation of Mulberry trees be it enacted that every man, as he is seated upon his division, doe for seven yeares together every yeare plante & maintaine in growth sixe Mulberry trees at the leaste and as many more as he shall thinke conveniente, & as his virtue & industry shall moove him to plante, and that all such persons as shall neglect the yearly planting & maintaining of that small proportion, shall be Subjecte to the censure of the Governour, & Councell of Estate.[118]

This was but the beginning of a series of legislative and executive actions that followed one upon the other for decades to come. The cultivation of mulberries was encouraged by threat of penalties, by reward of bounties, by exhortation, and by command with varying degrees of success.

Proper cultivation in nursery fashion should begin, it was outlined in the instructions sent to the Colony, with the collection of fruit from the best trees—those with "the fairest and roundest leafe." When washed in several waters and after pressing by hand, the small seed could then be taken from the bottom of the washing pan where they would settle. They could then be planted wet, or they could be dried and planted later, in prepared beds.

Nursery beds needed to be about four feet wide and of earth pulverized to the depth of two feet—"fat earth, the mold being made small, and well

[117]Hartlib, *Reformed Virginian Silk-Worm*, p. 10; Samuel Pullein, *The Culture of Silk* (London, 1758), p. 11.

[118]McIlwaine, ed., *Journals of the House of Burgesses of Virginia, 1619-1658/59*, p. 10.

dunged with good old dung, thoroughly rotten." The dry seed was then ready to be placed, in the spring after the danger of frost had passed, in "straight lines of royes or furrowers" some six to twelve inches apart and about an inch deep. Planting thusly would make it easier for weeding and watering—very necessary work in the first year.

Transplanting in new ground was necessary in the second year to give the plants more space for development. Here, being spaced from one to three feet apart, they were to grow until they were some six feet high with a trunk "as bigge as a mans arme at his wrest." Proper pruning would force branching. Having reached the desired state of maturity a second transplanting was in order.

During this, the last planting, the trees were to be put some 15 to 30 feet from each other. The distance depended in large part on the manner in which they were to be grown—as a hedge, "in the out borders of your ploughlands," as "a Wood," or about the yard of a plantation house. Hedges and woods were most often stressed. In any case, extraordinary care was to be taken in moving the trees.[119]

Transplanting was possible any time from September through April if "it be not frosty weather" or if the sun was not too hot. Patience was essential since it was important that they get "all the rootes whole and entire, without any being broken or bruised if it be possible." Before moving they should be cut back sharply and holes should be prepared for them three months in advance fully large enough to accommodate all roots and to have them at the depth from which they were taken. The roots should be carefully covered by hand leaving no "hollownesse" about them.[120]

The operation of nurseries to serve as a source of supply was but one of several methods of obtaining stock. Nurseries in which plants were grown from seed were recognized as good, but it was also seen to be a tedious and difficult operation. It was time consuming as well to produce the older trees which were of more value—"Experience teaches, that the leaves of the old Mulbery trees are farre more healthfull for the Worme and more profitable than those of the young ones."[121] It was assumed too that "in such places where they grow naturally . . . their fruit is better."[122] Grafting was recommended as was the planting of cuttings, the latter being desired—"set your Mulbery-slips as big as your thumb, about two feet long: and put them

[119]Bonoeil, *Art of Making Silke*, pp. 32-35; Hartlib, *Reformed Virginian Silk-Worm*, pp. 5-6; Williams, *Virginia's Discovery*, pp. 1-6; Bonoeil, *Observations*, p. 13.
[120]Bonoeil, *Observations*, pp. 9-12.
[121]Bonoeil, *Observations*, p. 9. The best trees were those seven and eight years old and older.
[122]Bonoeil, *Art of Making Silke*, pp. 32-33.

into good wel'digg'd ground in *September*, setting them a foot in the ground, bruising the ends of them, and watering them the next Summer well, if need be." There were those who thought hopefully that poplar, plum, oak, cherry, and apple trees would prove a serviceable substitute in feeding the silkworm. Such, although attempted in Virginia, did not prove successful.[123]

The care of adult trees was stressed and Bonoeil noted that "the Mulbery trees are to be husbanded, opened, digged, and dunged at the foote, as the Olive tree.[124] When open planting was practiced, it was considered desirable to plant "Oats and Pease" under the trees while it was recommended that corn be avoided since it impoverished the ground too much. The vine was thought to be a natural companion of the mulberry tree, and the cultivation of the two together was viewed with high favor either when adult trees were preserved in a clearing or when a grove, or hedge, was raised from nursery stock.[125]

Mulberry trees were believed to prosper in a dry rather than in a wet soil. "The soyle which is full of Springs, Lakes, Rivers, or (which is worst of all) Marshes, is particularly to be avoyded."[126] Excessively rich soil was not thought to be the best. It is true that it produced luxurant foilage, yet its nutritional value for the worm was questioned.

The necessity for a large stock of trees was continually stressed. One man, it was estimated, would need some two to three thousand trees to yield a good profit. A further estimate was that it would take a thousand weight of leaves to support the worms from an ounce of seed "all else being equal." Such a quantity of seed "makes easily five or sixe pound of silke." To produce a "thousand waight of leaves" some twenty to twenty-five good trees were needed.[127]

In the attempt to stimulate interest in the preservation and propagation of the mulberry tree, it was pointed out that while serving as the source of food for the silkworm was its first importance it was by no means the sole value of the tree. Its yellow close-grained wood was considered good for the fabrication of "hoopes and tubs and barrels" and wine casks. John Evelyn writing in 1670 spoke of "its durableness and *use* for the *Joyner and Carpenter*" and its suitability for "Hoopes, Bows, Wheels, and even Ribs for

[123]Hartlib, *Reformed Virginian Silk-Worm*, p. 22.

[124]Bonoeil, *Art of Making Silke*, pp. 32-33.

[125]Bonoeil, *Art of Making Silke*, p. 62; Edward Williams, *Virginia Richly and Truly Valued*, p. 18. "That wild Vines runne naturally over *Virginia*, ocular experience declares who delighting in the Neighbourhood of their beloved Mulbery-trees inseparable associates over all that Countrey." (Williams, *Virginia Richly and Truly Valued*, p. 16.)

[126]Williams, *Virginia's Discovery*, pp. 1-6.

[127]Bonoeil, *Observations*, pp. 16-17.

small Vessels in stead of Oak."[128] Its use "about ships and botes" and its excellence for "Conies" was stressed even in 1620.[129] Later, because of the wood's compactness and elasticity and the fact that it could be polished, it was thought to be of value to the upholsterer and carver. It was recognized too, because of its resistance to the action of water, as a good fence post material, being compared to the wood of the locust.[130]

The bark of the tree was said to make "good linen cloth and Cordage" while its fruit was palatable to both human and animal and could be made into wine. The native Indian liked the mature mulberry fruit and for this reason had trees growing near their dwellings. During the first weeks in Virginia in 1607, it being mulberry season, the Indians often had them in quantity at the "banquets" which followed the meetings of white man and native. They even offered them in trade with the English. The fruit too was recognized as "good feed" for poultry and excellent for hogs as well. It was further noted that the foilage of the tree which was left to fall at the end of summer when "given boyled to swine" helped "to keep them in good state, and begin to put them in flesh."[131]

The production of silk on a commercially profitable scale in Virginia was doomed to ultimate failure; however, the successful propagation and spread of the mulberry through natural and horticultural means evidently was a pronounced success and, begun in the first days of the settlement, continued for decades with only an occasional pronounced lapse. Initially the mature trees were simply left as nature had provided them which, as in the case of

[128]John Evelyn, *Sylva, or a Discourse of Forest-Trees, and the Propagation of Timber in His Majesties Dominions* (London, 1670), pp. 57-62.

[129]Bonoeil, *Observations*, pp. 17-18.

[130]William Kendrick, *The American Silk Grower's Guide*, p. 27; Chapin Jones, *Common Forest Trees of Virginia* (Charlottesville, 1922), p. 43.

Perhaps Samuel Pullein's statement regarding the virtues of the mulberry is a classic of its kind: "Besides the use of the mulberry-tree in the production of silk, its timber is said to be very serviceable, and it has the property of bearing wet without rotting, better than any other. . . . The inner rind of this tree is tough, like hemp, and might be twisted into strong cordage: most cattle are very fond of its leaves, which are very fattening; for which purpose they are also given to poultry, being bruised with a mixture of oatmeal. The black sort has very delicate and wholesome fruit, and [is] useful in many disorders of the throat and mouth; the tree itself makes a fine appearance in summer, scarce any other having a more beautiful show of foilage." (*The Culture of Silk*, pp. 13-14.)

[131]Bonoeil, *Observations*, pp. 17-18; Brown, *Genesis*, I, 401; William H. Gaines, Jr., "Foods of the Forest: The Fare of Foragers in the Wilds of Colonial Virginia," *Virginia Cavalcade* (summer 1952), pp. 36-38; Hu Maxwell, "The Use and Abuse of Forests by the Virginia Indians," *William and Mary Quarterly*, 1st ser., XIX, 96; *Tyler's Quarterly Historical and Genealogical Magazine*, II, 246. Henry Barham's *An Essay upon the Silk-worm: Containing Many Improvements upon this Curious Subject* (London, 1719) carried these suggestive headings relating to mulberry uses: "To preserve Mulberries," "To Make Mulberry Honey," "To make Mulberry Wine," and "To make Mulberry Brandy." Each was followed by a discussion of a proper method, or methods, of procedure.

Mulberry Island, must have been in quantity. This place designation, still in current use, was given as early as July 7, 1610, to describe a large tract on the James River some distance below Jamestown.[132]

The natural supply of trees was almost immediately recognized as both insufficient and often times inconveniently placed to support a silk industry. Consequently nursery propagation and transplanting was soon begun. In the first twelve years, 1607-1619, it is related that "Mulbery trees were also planted in those tymes neere the habitacons of our people." On January 20, 1620, when Governor Yeardley wrote from "James City" he stated that men were following their "daiely husbandtrie—som to clering ground for Corn and tobacko, som to building houses, som to plant vines and mulberie trees." In 1621 the Company made reference to the need for more trees "neare ther dwellings" and the preservation of "such as are already groweing" in Virginia. In the same year it was reported that "the whole country was well affected to the plantinge of both [vines and mulberry trees] and to the receaving of silke-worme foode." Two years later, in 1623, the Governor reported that of "The Mulberie trees great store were the last yeere planted, and shalbe yeerly inclosed, the like care of Vines we will have."[133]

Emphasis on planting and cultivating trees continued as in the instructions to Governor Wyatt in 1639 and Governor Berkeley in 1642, yet data on the actual results are hard to come by. To stimulate interest, the Assembly in 1656 acted again to require planting by law. It was stipulated that every land owner should plant ten trees for every hundred acres of land on the basis that it would promote silk which would become a profitable commodity. Some two years later the act was repealed as "rather troublesome and burthensome;" however, it was soon revived, and continued to be the law of the land.[134]

In 1662 it was agreed by the burgesses that a special reward should be given to anyone who should "provide fifty thousand trees by the Time Limited." In 1663 young mulberry trees were in short supply and it was neces-

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[132]Porter, "Historical Report on Fort Eustis Tract," p. 2. Reference to naturally growing mulberries are numerous in the contemporary records. There are similarly numerous references to grape vines as that made by Delaware and his council at "James Towne," on July 7, 1610, when they wrote "in every boske and common hedge, and not farr from our pallisado gates, we have thousands of goodly vines running along and leaning to every tree, which yeald a plentifull grape in their kind." (Fletcher, *History of Fruit Growing in Virginia*, p. 8; Brown, *Genesis*, I, 409-410.)

[133]*Records Va. Co.*, III, 474, and IV, 143; Brown, *First Republic*, 374; Neill, *Virginia Company*, pp. 274-275, 372.

[134]Hening, *Statutes at Large*, I, 420, 481, 520, and II, 32; Sainsbury, *Calendar of British State Papers, 1661-1668*, p. 11; Mary Newton Stanard, *The Story of Virginia's First Century* (Philadelphia, 1928), p. 232.

sary to extend the time limit for planting the specified number of trees. The implication here is that the act was being seriously considered by the planters. A minister, Alexander Moray, in Gloucester County reported in February 1665 that he had "planted here already ten thousand mulbery trees" and expected in two or three years "to reap good silk."[135]

Major Thomas Walker, also of Gloucester County, was even more seriously interested in the mulberry tree. It is reported officially that he planted more than seventy thousand "white Mulberry Trees" in two years – 13,642 in 1664 and 56,755 in 1665. As a result of this he attempted to collect the bounty which had been offered and on October 2, 1667, the House of Burgesses undertook to earmark 20,000 pounds of tobacco as a reward since he had "planted More than his due" and since he had "claimed the Encouragement accordingly."[136]

In 1666 the compulsory planting of mulberry trees was again abandoned with the Assembly expressing the vain hope that since it had been established that silk culture was beneficial that "all people now convinced of the profitts accrewing thereby will of their owne accords vigerously prosecute those now apparently profitable designes."[137] By this date, it seems clear the mulberry in several types was a familiar part of the scene throughout the Colony. At Jamestown, as could very well have been the case elsewhere, the mulberry was prominent in land descriptions being one of the most frequently cited boundary marking trees as shown in the phrases "a young Mulberry tree" on the "North side of the back Street," "the Mulberry Tree," "Another Corner Mullberry," and "the Mullberry Tree by the water side."[138]

V

"For nature (which doth naught in vaine) hath everywhere for this purpose [making silk] most luxuriously stored *Virginia* ready to your hands,

[135]McIlwaine, *Journals of House of Burgesses, 1659-1693*, p. 20; Hening, *Statutes at Large*, II, 191; *William and Mary Quarterly*, 2nd ser., II, 157. Moray continued: "I have planted them in an extraordinary way, which advances them 2 or 3 years growth, in respect of being sown in seed; and they are now, at writing hereof [February 1] all holding good, in bud and herbs; although this has been a very long and bitter winter with us, much longer and colder than ever I did find in Scotland or England." (*William and Mary Quarterly*, 2nd ser., II, 157.)

[136]McIlwaine, *Journals of the House of Burgesses, 1659-1693*, p. 49; *VMHB*, XVII, 238-239.

[137]Hening, *Statutes*, II, 241.

[138]Jamestown items in the Ambler Papers in the Library of Congress and Land Patents in the Virginia State Land Office (photostats in Colonial National Historical Park Library, Yorktown, Virginia). Other trees mentioned as landmarks in these records are "polehiccory," "persimon," poplar, red oak, gum, and white oak. In the case of a number of these trees, including the mulberry, it is possible to pinpoint their location on the ground today although they no longer stand.

with excellent Mulbery Trees," wrote John Bonoeil in 1622.[139] He was but echoing the same thought voiced on every hand by his contemporaries. There is little reason to doubt that Tidewater Virginia had mulberry trees in quantity growing wild in the forests and about the Indian clearings.

The native tree is now identified as the *Morus rubra*, red mulberry, a member of a large family of trees and plants which includes the Elm, Hackberry, Hemp, Osage Orange, and Nettle. In this family the *Morus* is but one genus and this embraces some dozen and a half species of which *rubra* is one. The red mulberry was the only species native to the Atlantic coastal area where it grew in New England, the Middle States, and southward. It extended inland into the area south of the Great Lakes occurring most frequently in Pennsylvania, Virginia, Ohio, Kentucky, and Tennessee reaching its best development, perhaps, in the Ohio River basin.

Many of its characteristics it shares with other species of its genus. The mulberry is a small or medium-size deciduous tree with simple rounded heart shaped, or lobed, leaves of a glossy green above and dull light green on the underside. It is a late leafing tree although its fruit, compounded of many small fleshy drupes, matures somewhat early. The wood of the mulberry is of a yellowish color and its sap is milky.[140]

At the time of the settlement at Jamestown the English were quite familiar with two species of the mulberry—the black (*Morus nigra*) and the white (*Morus alba*). They knew as well that there were a number of varieties of the latter:

> You must know, that there be two races of Mulbery trees; the blacke Mulbery tree and the white Mulbery tree, which differ in wood, leafe, and fruit: of the blacke Mulbery tree there is but one sort . . . the fruit also being blacke, is greater and better to taste. . . . Of the white Mulbery tree there are manifestly known three kinds, which neverthelesse are onely distinguished by the divers colours of the fruit, which are white, blacke, and red. . . . The blacke Mulbery tree leafe makes grosse and course silke; but the white Mulbery tree leafe makes fine, & high prized.

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[139]Bonoeil, *Art of Making Silke*, p. 60. *In News from Virginia* by R. Rich published in London in 1610, it was related:

> Great store of fowle, of venison,
> Of Grapes and Mulberries,
> Of chestnuts, walnuts and such like
> Of fruits and strawberries,
> There is indeed no want at all.
> (Brown, *Genesis*, I, 425.)

[140]D. J. Browne, *The Trees of America*, pp. 457-459; F. Schuyler Mathews, *Field Book of American Trees and Shurbs* (New York, 1915), pp. 169-170; *Gray's New Manual of Botany*, 7th ed., pp. 347-348; William M. Harlow and Ellwood S. Harrar, *Textbook of Dendrology*, 2nd ed. (New York, 1937), pp. 389-390; Julia Ellen Rogers, *The Tree Book* (Garden City, N. Y., 1931), p. 289.

It was further related that the "white Mulbery tree leafe which beares the blackeberries" was the variety which exceeded all other in quality of silk.[141]

It would appear that the early colonists falsely identified the native mulberry as being a variety of *Morus alba* which produced a dark red fruit. As such it would have been just the type of tree thought needed for the silkworm. They were, in fact, mentioned specifically as "White Mulberry trees" in some of the literature and correspondence of the 1609-1610 period.[142] Ralph Hamor wrote that "no Country affoordeth more store of *Mulbery* trees, or a kind with whose leafe they [silkworms] more delight, or thrive better," indicating that he felt that it was the tree which was the most highly prized.[143]

At what point the settlers realized that they were confronted with a new species of the mulberry tree—one usable for silk production but less suitable generally than the white mulberry—it is difficult to determine.[144] Edward Williams writing in 1650 identified only the white and black species, however, his information on mulberry trees, as on many aspects of silk culture, seem to have been taken bodily from Bonoeil's writings thirty years before.[145] John Evelyn in 1670 did not recognize the red species although his discussion, it should be noted, was confined largely to English trees.[146] It may be significant that Governor Francis Wyatt's instructions in 1639 and those of Governor William Berkeley in 1642 carried an order for the planting of "white Mulbery Trees."[147] Heretofore planting references generally did not specify a particular type. If these instructions are taken literally it meant that *Morus alba* was being, or had been, introduced from Europe, for no trees of this species were native to eastern America. By 1665 it must have been well established since one man, Major Thomas Walker of Gloucester County, is reported to have planted some 70,000 in two years. Certainly it had been noted by this date that the native Ameri-

141Bonoeil, *Observations*, pp. 7-8.

142Virginia Company, *A True Declaration of the Estate of the Colonie in Virginia* (London, 1610) in Force, *Tracts*, Vol. III, Tract No. 1, p. 22; Brown, *Genesis*, I, pp. 265, 268. In 1588, in Thomas Hariot's "Brief and True Report," the mulberry observed in Virginia was said to be "the same as those we have in England." (Stefan Lorant, ed., *The New World: The First Pictures of America* [New York, 1946], p. 252.)

143Hamor, *A True Discourse*, p. 35.

144"All the trees will serve to nourish the silkworm, but the white mulbery (*Morus alba*) and its varieties, are considered much the best." (Browne, *The Trees of America*, p. 436.) This same thought is expressed in Clarke, *A Treatise on the Mulberry Tree and Silkworm*, pp. 137-138; in *D'Homergue upon American Silk*, p. 33; and, in London, *Arboretum*, III, p. 1343.

145Williams, *Virginia's Discovery*, pp. 1-3.

146Evelyn, *Sylva*, pp. 57-62.

147*VMHB*, II, 287, and XI, 56.

can tree had characteristics unlike either the black or the white mulberry—minor differences in form, leaf, bark, and fruit.

Morus nigra, seemingly a native of Persia, had been known for centuries along the Mediterranean and had been planted in England for many years before the settlement at Jamestown. At the opening of the seventeenth century it was thought preferable for silk production although later it was seen to be inferior to the white variety, but it continued to be planted and raised for its luscious, large, almost black fruit—one of its distinguishing characteristics. It was known and commonly planted in England, and it would have been natural for the colonists to have brought in young plants or at least some of its seed. That there was an exchange of plants between the Old and New World beginning at an early date is well known. Its leaves differed from *Morus rubra* in that they were duller green and had few lobes. It was a rounded, broad tree that grew much less high than the red species and was capable of attaining great age.[148]

This tree became known as the "English Mulbery," and it is reported that it was the most common species of *Morus* in seventeenth-century English gardens. The specific time of importation into Virginia is difficult to determine. It can be inferred from Robert Beverley's reference to "Our Mulberies are of three sorts, two black and one white" that it was established at the close of the seventeenth century. William Byrd, a bit later, mentions it specifically as well established. Later in the eighteenth century there are ample references to the widespread appearance of *Morus nigra* in Virginia.[149]

The early colonists were not as familiar with the white as with the black mulberry, it seems, but it was being grown in England and being studied and described by those interested in its propagation at the time of the first settlement in Virginia. It differed from the native American red mulberry, and these differences must have become apparent before many years passed. It is a slighter tree than *Morus rubra,* its leaves are smaller, its light gray-brown bark is more deeply furrowed, and its fruit is less attractive and far less tasty even in the case of the darker fruited varieties. As a tree it has more numerous upright growing, whitish barked shoots. It is

[148]Arthur Shurcliff, "Trees: A Catalogue of trees native to or introduced to northeastern America during the Colonial and early Republic periods," a typewritten volume in Department of Research, Colonial Williamsburg, Williamsburg, Va.; Browne, *The Trees of America,* pp. 437-442; Rogers, *The Tree Book,* pp. 239, 241; *Gray's New Manual of Botany* (7th ed.), pp. 347-348; Harlow and Harrar, *Textbook of Dendrology* (2nd ed.), pp. 389-390.

[149]Robert Beverley, *The History and Present State of Virginia,* p. 131; Edwin Morris Betts, ed., *Thomas Jefferson's Garden Book, 1766-1824: With Revelant Extracts from His Other Writings* (Philadelphia, 1944), pp. 40, 409; John C. Fitzpatrick, *The Diaries of George Washington,* I, 209; Richmond Croom Beatty and William J. Mulloy, eds., *William Byrd's Natural History of Virginia,* (Richmond, 1940), p. 34; Loudon, *Arboretum,* III, 1343-1348.

said to leaf two weeks earlier than the other members of its genus.[150]

The tree is a native of China, appeared early in the Near East, and was introduced into Europe in the twelfth century. It is said to have been brought to England in 1596.[151] As in the case of the black mulberry, the date at which it was brought to America is difficult to fix. It is commonly thought to have been in Virginia prior to 1650, and some even may have been brought to America prior to 1600 by the Spanish to the south.[152]

Beverley mentions the white specifically and calls it one of "Our Mulberies" certainly indicating, as he did in the case of *Morus nigra*, that at the close of the seventeenth century it was well established in the Colony. He spoke of these as "well spread, large bodied Trees, which run up surprisingly fast. These are the proper Food for the Silk-Worm."[153] Byrd too commented on the white mentioning that its fruit was not as good as the black—a point, also noted by Beverley.[154] Somewhat later (1762) John Clayton, in a more professional manner, specifically listed the red, the black, and the white as then growing in Virginia.[155]

Although at first not properly identified, or evaluated, the native mulberry was used and observed and eventually recognized as a tree both alike and distinct from the mulberries known previously in western Europe. It took some time for the colonists to conclude that the *Morus rubra* was not generally as suitable, although it could be used for raising silkworms, as were a number of varieties of *Morus alba*. Such was known much before William Byrd's *Natural History* was published, however, in this the conclusion is rather concisely and effectively stated:

> Three species of *mulberry trees* are to be found [in Virginia]. The first of them is the common red mulberry tree, which becomes ripe earliest of all fruits (except strawberries) and has fine sweet berries. These trees become very tall and large here, and give a very beautiful and pleasant shade in summer. Their juice is crimson red, and gives good wine, but no one wants to take trouble enough in order to make it. The other species has very tender foliage, good for silkworms.[156]

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[150]Clarke, *A Treatise on the Mulberry Tree and Silkworm*, pp. 141-149; Mathews, *Field Book of American Trees and Shrubs*, p. 170; Loudon, *Arboretum*, III, 1348; Rogers, *The Tree Book*, p. 239; *Gray's Manual of Botany* (7th ed.), pp. 347-348.

[151]Loudon, *Arboretum*, III, 1348.

[152]Shurcliff, "Trees."

[153]Beverley, *History of Virginia*, pp. 130-131.

[154]*Byrd's Natural History*, p. 34.

[155]John Clayton, *Flora Virginica exhibens Plantas* (Lugdoni Batavorum, 1762) as photolithographed (Cambridge, Mass., 1946), p. 146.

[156]*Byrd's Natural History*, pp. 34-35.

Morus rubra has been listed as *Morus virginica*, *Morus pennsylvania*, as the Red Fruited Mulberry, and as the "Red or Virginia Mulberry—Tree." It is said to have been cultivated in England early in the seventeer.th century. (Loudon, *Arboretum*, III, 1359-1360; Browne, *The*

It is the red mulberry that continues to be the most common of the three species in Virginia. In height the tree sometimes reaches sixty or seventy feet, and its dark wine red berries can be both large (some three-fourths inches long) and pleasantly sweet. The fruit usually matures in early July, although Captain John Smith spoke of the berries being fully ripe in May and in June. It produces stout branches which grow into a round head. Its heart-shaped leaves are usually lobed and are a glossy medium green above and a flat, dull green underneath. Its multiple twigs are slender and its dark brown bark is indented into narrow flat ridges. Its light yellowish colored wood is that which was favored for fence posts and for some types of boat construction.[157]

There is another tree that should be mentioned at this point. It is the paper mulberry, so named for its use in the Orient, particularly in Japan, for making paper. This tree is often mistakenly thought to be the mulberry closely associated with the attempts to produce silk in Virginia and in other American colonies in the Colonial era, and is mistakenly accepted as being well established in this country prior to the American Revolution. Actually the paper mulberry (*Broussonetia papyrifera*) is of a genus separate from the *Morus* and consequently possesses characteristics which set it apart from the mulberries with which it is often carelessly grouped.

It is a hardy, normally small, tree that was native to China, Japan, and Polynesia, but in America can now be found from New York to Florida and west to Missouri. It is often an escapee from cultivation since it is readily propagated by suckers as well as by layers, root cuttings, and seed. It is a fast growing tree that becomes broad and bushy and often gives a dense shade. Its trunk frequently ramifies at a short distance above the ground into numerous branches. It is a deciduous tree with broad heart-shaped, or deeply lobed, leaves which are rough and have no sheen. The deep green leaves, heavily veined on the dull green underside, in autumn turn a uniform bright yellow before they fall from the tree. Its catkin like flowers appear in the spring with, or before, its leaves. The fruit, insipid and tasteless, is essentially inedible. In Virginia the male plant is quite

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Trees of America, pp. 457-459; William Forsyth, *A Treatise on the Culture and Management of Fruit Trees* [Albany, 1803], p. 123.)

[157]Arber, *Smith's Works*, I, 56; Mathews, *Field Book of American Trees and Shrubs*, pp. 169-170; *D'Homergue upon American Silk*, pp. 32-33; Rogers, *The Tree Book*, p. 239; Harlow and Harrar, *Textbook of Dendrology* (2nd ed.), pp. 389-390; *Gray's New Manual of Botany* (7th ed.), pp. 347-348.

common while the female of the species is rarely seen. The bark of the tree, especially the young tree, is smooth and grayish in color.[158]

The paper mulberry wood is soft, spongy and of little value. In the nineteenth century its leaves were used in experiments with the silkworm and found to be of no value as a food source. Attempts were made to use its bark, as did the Japanese, in the making of some types of paper. Paper was actually produced, however, the efforts were largely unsuccessful.[159]

A misleading characteristic of the tree is its often gnarled and aged appearance. This results from internal decay and from the ability of the tree to produce new shoots even when severely twisted or broken. It is very brittle and highly susceptible to damage from wind storms. It should be noted that its ancient look is not necessarily an indication of great age.

Broussonetia papyrifera appears to have been introduced into America as a result of botanical research and horticultural interest and was propagated because of its ornamental appeal. The first such tree in England was identified in 1751 by Peter Collinson as the plant coming from a seed which had been sent to him from China. It, he related, "proves [to be] the paper Mulberry."[160] How soon this tree and others had grown sufficiently in England to permit its transfer across the Atlantic is not known. It has been reported that the first male plant (the most common form) of the *Broussonetia papyrifera* was introduced from Europe in 1784 by William Hamilton of "The Woodlands" near Philadelphia.[161] It does seem highly significant that John Clayton did not list it in 1762, although he did mention the imported *Morus nigra* and *Morus alba*.[162]

It is of interest to note that Thomas Jefferson, who was ever alert to add to his garden at "Monticello," did not, judging by his correspondence, actually obtain paper mulberries until 1806. The following year he secured thirteen plants from Thomas Main at the cost of fifty cents each. In 1815 Jefferson commented that the paper mulberry was "charming near a porch for densely shading it," and in 1816 he stated that it was "the most beautiful & best shading tree to be near the house, entirely clean, bearing no fruit,

158Rehder, *Manual of Cultivated Trees and Shrubs*, p. 199; Mathews, *Field Book of American Trees and Shrubs*, p. 169; Loudon, *Arboretum*, III, 1361-1362; Browne, *The Trees of America*, pp. 461-463; *Gray's New Manual of Botany* (7th ed.), p. 347; Harlow and Harrar, *Textbook of Dendrology*, pp. 389-390.

159Bernard McMahon, *The American Gardener's Calendar*, 11th ed. (Philadelphia, 1857), p. 298; *The Silk Question Settled; Report of the Proceedings of the National Convention of Silk Growers and Silk Manufacturers, Held in New York, October 13th and 14th, 1843*, 2nd ed. (Boston, 1844), p. 70.

160Norman G. Brett-James, *The Life of Peter Collinson*, (London, 1926), p. 245.

161Browne, *The Trees of America*, pp. 461-463.

162Clayton, *Flora Virginica*, p. 146.

scarcely yet known in America." As late as 1840 the paper mulberry was being sold in New York for fifty cents for the male and seventy-five cents for the female plant—a price considerably in excess of the white mulberry (*Morus alba*).[163]

VI

Not troubled by past failures and spurred on by renewed urgings out of England, principally by the hand of Virginia Ferrar and the pen of William Edwards, Samuel Hartlib, and others, there was a burst of interest in silk culture throughout the Colony of Virginia at the mid-point of the seventeenth century.[164]

Men still felt that the climate was agreeable, that proper food was present in abundance, that building material, land, and accommodations were, or could be made, plentiful, and that labor (including men, women, and children) was no problem. The fact that sericulture was largely a spring activity interfering with planting was passed over lightly. The demand for silk was increasing at home and abroad, and England was dependent on a foreign source when Virginia could correct this situation and produce as much and better silk than did France and Italy. The fact that the Virginia economy was dependent upon a single crop—tobacco—was a disturbing point as well.[165] Its price controlled the prosperity, or lack of it, in the Colony. Such would not be true in an economy with a broader, more diversified base.

Perhaps this bit of verse by John Ferrar summarizes the hope for silk that the leaders of the effort confidently shared:

> Where Worms and Food doe naturally abound,
> A Gallant Silken Trade must there be found:
> Virginia excells the world in both,
> Envie nor Malice can gaine say this troth.[166]

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[163]Jefferson's *Garden Book*, pp. 321, 322, 334, 547, 556, and elsewhere; Loudon, *Arboretum*, III, 1361-1362.

[164]The interest of Nicholas and John Ferrar in the Colony continued after the dissolution of the Virginia Company and Virginia, daughter of John, was named for the new land. She, like her father and uncle, continued the family interest in the Colony being a particularly devout patron of the silkworm with which she conducted experiments of her own in England. (*VMHB*, XI, 41-46.)

[165]There was at least some very ill feeling toward Virginia's one staple of tobacco: "Your own Experience (Gentlemen) will I hope ere this time twelv-moneth certifie you of the truth that is here set down, unlesse you shall rather chuse to hugg your own poverty, and make much of that slavery and drudgery you wear out your selves with, in toyling about that contemptible, beggarly *Indian* Weed, TOBACCO." (Hartlib, *Reformed Virginian Silk-Worm*, p. 26.)

[166]Hartlib, *Reformed Virginian Silk-Worm*, p. 31.

Coming with this renewed impetus in sericulture were several new ideas or considerably more emphasis on previously mentioned but little emphasized points. One was the possibility of a double, or multiple, silk harvest each year—"Neither doe I comprehend a sufficient Reason why in so happy a Climate as that of Virginia; there may not be a double Silke Harvest."[167] The use of natural bottoms, mentioned as early as 1619, was now seriously discussed by Samuel Hartlib in 1655, who went on to summarize the latest data on raising silkworms, even the cultivated type, in the open on naturally growing trees. He observed that the menace of birds was the only real reason that Virginia did not abound "with plenty of the naturall wilde Silkworms." Such natural feeding was treated as a new discovery by Virginia Ferrar.[168]

It was proposed seriously too that the Indians could be used as a source for the bulk of the labor needed in tending the worms and in the care of the "Cods." It was thought that it would appeal to their curiosity and ingeniousness and would be attractive in that the wives and children could do most of the work. Besides it would come at a time when food was short with them and one writer observed "he [the Indian] will with all eagernesse prosecute it . . . because it concernes his belly, to which no people under Heaven are more indulgent."[169]

In spite of a lack of labor and settled communities, despite inadequate customs and tax protection, despite market and exchange difficulties, despite the proven wealth in tobacco and the need for quick profit to finance slave labor, and despite inexperience and the lack of trained workers, efforts in sericulture were expanded in the 1650-1675 period. Possibly one of the sparks that set off the new and rather sustained efforts was the shipment of a "store of Silkworm-eggs" by Virginia Ferrar who was interested in seeing that none who wanted a stock to begin the "Silk-work" would lack it.[170]

One of the most prominent persons to espouse fully the cause of silk in this period was Edward Digges, who in 1650 had established his home on the York River, between Felgates and Indian Field Creeks, some four miles above present Yorktown. He, coming from a distinguished English family,

[167]Williams, *Virginia Richly and Truly Valued*, pp. 39-40.

[168]*Reformed Virginian Silk-Worm*, pp. 11-14, 16, 21; Brock, ed., *Abstract of the Proceedings of the Virginia Company*, I, 67. An advantage of the natural feeding, it was said, was that it required "neither skill nor pains" and consequently would take less time and would not conflict with other work, not even with tobacco "if you will have still smoak."

[169]Williams, *Virginia Richly and Truly Valued*, pp. 38, 41.

[170]Hartlib, *Reformed Virginian Silk-Worm*, pp. 14, 21; Beverly, *The History and Present State of Virginia*, p. 319; Clarke, *A Treatise on the Mulberry Tree and Silkworm*, pp. 109-110; Thomas Glover, *An Account of Virginia, Its Scituation, Temperature, Productions, Inhabitants . . .* (Oxford, 1904, a reprint), p. 12.

was the second governor of the Colony in the Commonwealth period, succeeding Richard Bennett, after selection by the Assembly, in March 1656. This office he held until March 1658.

At his home on the York, Digges distinguished himself along lines other than political, growing a remarkably fine crop of tobacco known as the "E-Dees" which gave his estate the designation "E.D. Plantation." He himself appears to have been even prouder of his interest and success in the raising of the silkworm. His wife Elizabeth saw fit to incorporate pointed reference to this in the epitaph on his tombstone in the old Digges burial ground adjacent to the York River where he was buried after his death on March 15, 1675.[171] It reads in part: "A gentleman of most commendable parts and Ingenuity, the only introducer and promoter of the SILK Manufacture in the Colonie, And in everything else a pattern worthy of all Pious imitation.[172]

Edward Digges was pursuing his silk interest well before he became governor and was in correspondence with the Ferrars in England. A letter from Digges directed to John Ferrar in Huntingtonshire and dated June 21, 1654, was printed in the following year and in this form is still available. In it he comments about Ferrar's "many and severall Letters, printed papers, and Queries" which he had received. In it he also requested that Ferrar "present my service to the vertuous Lady *Virginia*."

In this letter Digges related that "I am now confident I have conquered all the great feared difficulty of this rich commodity [of silk], and made its sweet easy and speedy Profitt so evident to all Virginians." He felt that it would be of great benefit and that England too would reap considerable profit. He hoped that he himself might have "the comfort and joy, in setting up so noble, so beneficiall, a staple vendible commodity."

In the spring of 1654 he was handicapped by an inadequate supply of mulberry trees near his "present Plantation," and this "onely difficulty made me to make but 400. pound weight of Silk-bottomes," which he then had wound. In addition to this he made ten pounds of "seed" which he intended "to give away to diverse Planters" to whom he hoped to show that silk would "not at all hinder their too much beloved *Tobacco*, but that they

[171]Elbert Cox, "Bellfield, Ancient Seat of Governor Digges," *Historical Notes* (a mimeographed periodical prepared by Colonial National Historical Park), March-April, 1932, pp. 4-9; *William and Mary Quarterly*, 1st ser., XV, 37-38; Tyler, *Cradle of the Republic*, 2nd ed., p. 61; Clyde F. Trudell, *Colonial Yorktown* (Richmond, 1938), pp. 23-26; *Tyler's Quarterly Historical and Genealogical Magazine*, I, 234; Lyon G. Tyler, *Encyclopedia of Virginia Biography* (New York, 1915), I, 47-48.

[172]See illustration facing p. 56.

may proceed with both together." Then, they too could become "Silk-masters" as was Digges.[173]

It was about this time perhaps that Digges sought to import workmen to teach him the skills of silk culture. At his "very great charge" he "sent for two *Armenians* out of *Turky* skillful men." It may be that Digges, who was governor then, had a hand in the Assembly action which in 1656 set aside 4,000 pounds of tobacco for "George the Armenian" to encourage him in the making of silk and to induce him "to stay in the country to follow the same." It may very well have been too that Digges had a voice in the measures to stimulate the planting of mulberry trees and to provide a bounty for silk production—acts which passed in the years 1656-1658. It seems ironical that the payment of bounties of 1658, as in most other cases, was listed in terms of tobacco—5,000 pounds to him who would first produce 100 pounds of wound silk in one year. A law of 1656 had reiterated that "by experience silke will be the most profitable comoditie for the countrey (if well managed).[174]

Edward Digges in the period of the 1650's and later was by no means alone in the promotion of silk. His fellow workers and associates were well scattered within the Colony. There was Colonel George Ludlow who moved from his earlier home in Norfolk County and settled on the York just downstream from present Yorktown.[175] He, as did Digges, thought "That thence from silk great profit will arise," and he hoped "that he and others shall soone weare" "rich Silken stuffs made shortly there [in Virginia]." In Charles City County a leader in the enterprise was Major John Westhrope who was also loud in praise and in hope. Then too there was George Lobb, "that prudent old Planter" of Isle of Wight County, who in 1656 sat in the Assembly at Jamestown. Silk promoters in the Norfolk area included the names of Mary Ward, cousin of Virginia Ferrar; Dr. Richard Russell, a "learn'd Phisitian"; and, possibly Mrs. Sarah Willoughby. In Nansemond County there was "Master William Wright" and Mrs. Thomas Burbage. In James City County Colonel Thomas Pettus was a leader, while in Middlesex County there was Sir Henry Chicheley.[176]

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[173]Hartlib, *Reformed Virginian Silk-Worm*, pp. 27-28.

[174]Hartlib, *Reformed Virginian Silk-Worm*, p. 26; Stanard, *Story of Virginia's First Century*, pp. 232-234, 244; Hening, *Statutes*, I, 420, 425, 487. "George the Armenian" apparently remained in Virginia for some time for in September 1663 the Assembly granted him the specific reward for "having proved the making of ten pounds of wound silk." (Hening, *Statutes*, II, 199.)

[175]The Moore House, home of Augustine Moore, where the surrender terms for Cornwallis were drafted on October 18, 1781, still stands adjacent to the site of the earlier Ludlow home.

[176]Hartlib, *Reformed Virginian Silk-Worm*, pp. 25, 31-35; Tyler, *Encyclopedia of Virginia Biography*, pp. 50, 111, 113, 279, 318, 357; Edward D. Neill, *Virginia Carolorum: The Colony under the Rule of Charles the First and Second* (Albany, 1886), p. 240; *William and Mary*

It was Edward Digges who led the way, however, if the following bit of verse by John Ferrar, Jr., is accepted:

> But noble *Diggs* carries the Bell away
> (Lass! want of eggs made so small the essay)
> His two *Armenians* from Turky sent
> Are now most busy on his brave attempt
> And had he stock sufficient for next yeare
> Ten thousand pound of Silk would then appeare
> And to the skies his worthy deeds upreare.

Digges was something of an experimenter as is revealed in a letter which he wrote from Virginia to Dudley Palmer in England. In this he reports:

> I have kept leaves about twenty four hours after they were gather'd, and flung water up[on] them to keep them from withering; yet when I have fed the Silk-Worms without wiping the leaves, I observed they did as well as those fresh gather'd. Further . . . I never observed that the smell of tobacco, or smells which are rank, did any ways annoy the Silk-Worms, which is contrary to the general received opinion.

Likewise he found that thunder had no effect on the worms—"in the thunder . . . [they] kept to their business as if there had been no such thing." Holly he found to be a good material for making "arbours or bowing branches" on which the worms could spin without any regard for, or inconvenience from, the "prickles." At the time of his letter to Palmer, his experiments on the two crops per year thesis were inconclusive due to errors, or omissions, on the part of his servant. On this he wrote, "I must crave your patience till next year."[177]

Statistics to determine just how much silk was produced or how much time was devoted to the enterprise are difficult to obtain. It seems that production was small, but the time used was considerable. John Hammond writing in 1656 spoke hopefully of tobacco being "laid by" in favor of the "making of Silk (a Sample of 400 lbs. hath already been sent for *England*, and approved of)."[178] No connection between this and the persistent rumor

Quarterly, 1st ser., VII, 224, 291, and III, 44; Hening, *Statutes*, I, 405. Others mentioned as silk producers, or experimenters, were Lawrence Ward (a landowner in Isle of Wight County), Esquire Ferrar, and Mistress Garrett.

[177]Hartlib, *Reformed Virginian Silk-Worm*, pp. 34-35; *VMHB*, XI, 42-43; Barham, *An Essay upon the Silk-Worm*, pp. 98-99. The letter of Digges to Palmer is given in Barham's *An Essay*.

[178]*Leah and Rachel, or the Two Fruitful Sisters Virginia and Maryland*, p. 17.

that Charles II wore a robe made of Virginia silk at his coronation has been seen. Seemingly, however, Virginia silk was there to be used. It appears clear from a letter to Edward Digges in March 1660 that he had taken silk to England, where he went as a special agent in 1658, or that he had received some while there for presentation to the King—silk produced by Colonel Thomas Pettus. The letter reads: "I have att last obtain'd a Dispatch of his Majesties gracious and kind acknowledgement of the Satisfaction hee receaved in the present of Silke made to his Majestie by your hands from Collonll pettus." The letter continues with an expression of the King's interest in enterprises such as silk.[179]

Edward Digges persisted in his interest. Berkeley, in 1670, in recommending him for the post of auditor-general of Virginia, a post which he held from 1670–1675, spoke of him as the man who had showed his fellow Virginians how to successfully wind silk.[180] He continued to raise worms at his York River plantation as well as on his acres at "Denbigh" in Warwick County. A small ball of raw silk said to have been produced by Edward Digges at "Denbigh" in 1675 has survived and is preserved by the Virginia Historical Society.

When in 1660 Sir William Berkeley became for a second time the royal Governor of Virginia, an office which he held until 1676, the Colony was again headed by an executive who believed that silk had a real future as did other of the so-called staple commodities. He saw the evils of a one-crop economy, and for that reason sought to reduce its output while encouraging other activities. In his *A Discourse and View of Virginia,* Berkeley wrote: "For though *Virginia* yet only produceth *Tobacco,* as to the main of her Traffick, yet it has produced Silk, Flax, Hemp, Iron, Rice, Pitch, Tar." As for silk, he reported, "we want only skilful men to teach us to produce [it] the cheapest and readiest way," and "within seaven years, if we are assisted and commanded, we shall bring in yearly as much Silk into *England,* as now costs the Nation two hundred thousand pounds sterling at

[179]British Museum, Additional MS, transcripts, Manuscript Division, Library of Congress, No. 11411, T. Povey's Register of Letters Relating to West Indies, 1655-1660, folio 24; *William and Mary Quarterly,* 2nd ser., I, 66. John Burk (*History of Virginia,* II, 125) quotes Charles II, about 1661, as saying that he had worn Virginia Silk which was not inferior to that produced in other countries. This Burk feels could be the source of the coronation robe story.

[180]Stanard, *Story of Virginia's First Century,* pp. 244-245. In "A Briefe Memorial . . . concerning the Auditor's place in Virginia" (1670?) it is related that "the present Governour [Berkeley] . . . granted his commission to Edward Digges Esq. (a person every way fittly qualified for it) who by his great industry and charg hath latly brought silke to that perfection, that his Majesties Revenews, (in all probability) will shortly be much increased by it." (*VMHB,* XIX, 361-362.)

least."[181] Such was his feeling, and insofar as he could he sought to encourage its production by others throughout the Colony while he gave it his personal attention at his "Green Spring" home. In this he was following his personal conviction which coincided, at least in form, with the expressed wishes of the King, of the Council of Foreign Plantations, and on occasion, particularly in hard times, of the Virginia planters.

The minutes of the Council of Foreign Plantations for February 1661 contain statements urging Virginia to look to the development of staples and the enforcement of laws concerning them—laws such as those requiring the planting of "white mulbery trees." In March 1662 the Virignia Assembly passed still another act to require mulberry tree planting. For each hundred acres occupied it was necessary to plant ten trees "at twelve Foote distance each from other, and secure them by weeding, and a sufficient Fence from Cattle, horses, &c." This act too carried a bounty of fifty pounds of tobacco for each pound of "wound silke" produced. In May of the same year Virginia planters and merchants, suffering from an over production of tobacco, went on to petition the King to approve their planned cessation of planting and limitations on the shipment of the commodity from the colony. This would give greater encouragement to the staples—silk included. This petition was rejected by Order in Council on June 13, 1662.[182]

The Council, at this time, also directed Berkeley to return "to his Government in Virginia" and to work with Maryland officials to find ways to promote the staples. Berkeley had repaired to England the year before to protest the navigation restraints and seemingly lost in his attempt to curb tobacco production and to get customs exemption for staples. After the King had directed his return to Virginia, Berkeley petitioned for a few skillful men to assist him in the encouragement of these long sought commodities—men who could "teach the nearest and cheapest way to produce such commodities." In this he seems to have been denied. Likewise his request for customs exemption was parried. The King issued a warrant to allow him a ship load of tobacco (300 tons) custom free, but after he

[181]See pages 5, 7, and 12, of the Norwalk, Connecticut, 1914 reprint of the London, 1663 edition. Berkeley's economic policy is concisely discussed in Harold Lee Hitchens, "Sir William Berkeley, Virginia Economist," *William and Mary Quarterly*, 2nd ser., XVIII, 158-173.

[182]Hening, *Statutes*, II, 121-122; *VMHB*, XVIII, 295, 299, 301; Sainsbury, *Calendar, 1661-1668*, p. 90.

The tobacco aspects of this are well presented in Jerome E. Brook's introduction to *Tobacco: Its History Illustrated by the Books, Manuscripts and Engravings In the Library of George Arents, Jr.*, (New York, 1937), Vol. I.

The Edward Diggs Tomb at Bellfield
near Yorktown, Virginia

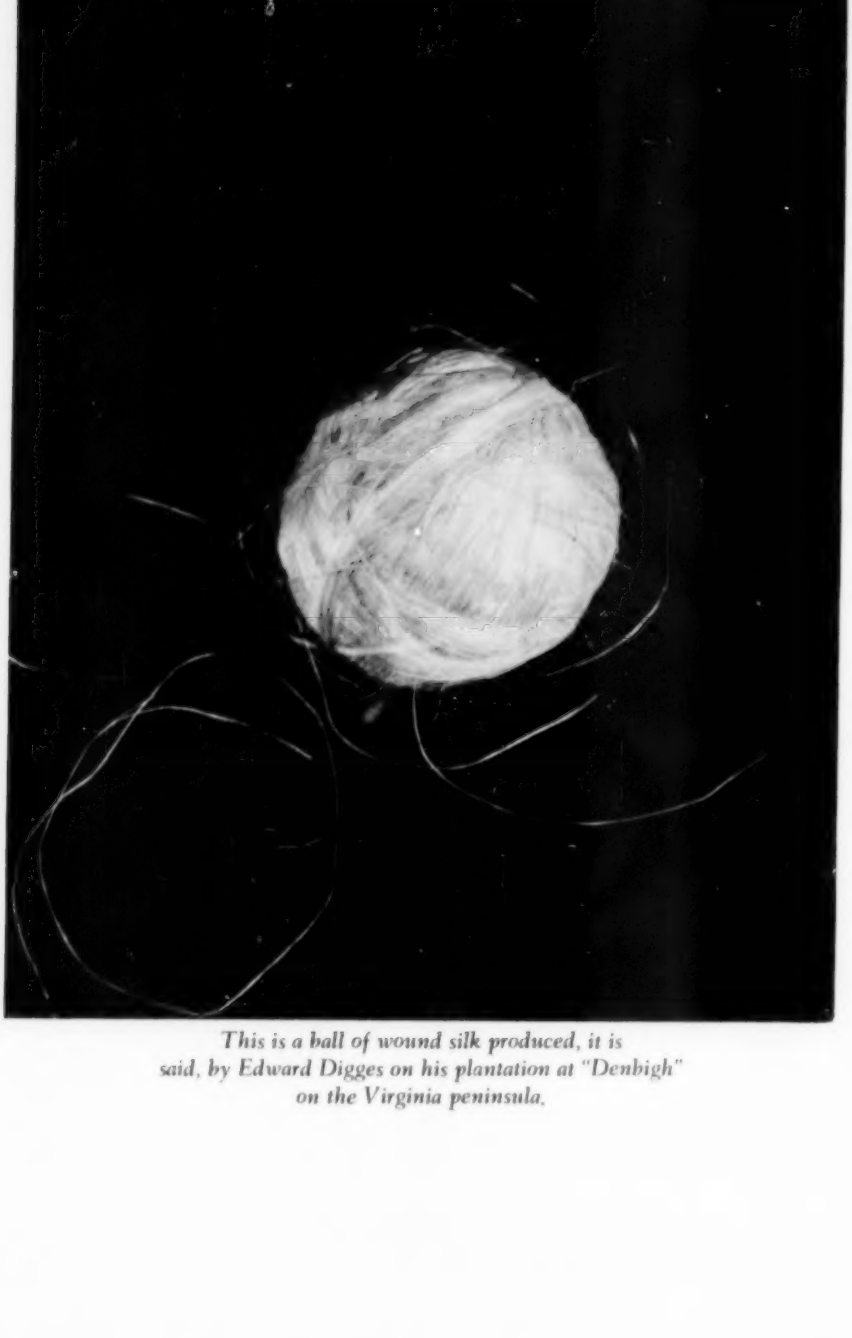
"S

To the memory of
EDWARD DIGGS ESQR.

Sonne of Dudley Diggs of Chilham in Kent Kn't & Bar't
Master of the Rolls in the Reign of K. Charles the First
He departed this life the 15th of March 1674/5 in the LV yeare
of his age, One of his Maj'tys Counceil for this his Colonie of

VIRGINIA

A gentleman of most commendable parts and
Ingenuity, the only introducer and promoter
of the SILK Manufacture in the Colonie
And in every thing else a pattern worthy
of all Pious Imitation. He had issue 6 sonnes
and 7 daughters by the body of ELIZABETH
his wife Who of her Conjugall affection
hath dedicated to him this Memorial"



This is a ball of wound silk produced, it is said, by Edward Digges on his plantation at "Denbigh" on the Virginia peninsula.

should send a ship to England of the same capacity loaded with silk, hemp, flax, pitch, and potash which had been produced in Virginia.[183]

In March 1663 Berkeley wrote to the authorities in England that Virginians "in mighty numbers will shortly bee employed in perfecting those excellent Commodities of Hemp and Flax, & silk, which this Country is most capable of, and now the Planters are more industriously intent on." Berkeley was at this time paying £500 a year wages to workmen, and within two years his own family, he wrote, would send home to England a ship load of flax, hemp, and potash. Of the latter he sent a ton in 1663.[184] A less hopeful note was seen in the proposal of the Virginia Assembly in September 1663 to repeal the act requiring the planting of mulberries. It contained too a realistic thought in that "it is humbly conceived that (if it be beneficial) men as they find themselves in a capacity will fall upon it [silk culture] without constraint."[185]

Berkeley was not easily convinced, however, and tenaciously clung to his optimism. In August 1665 he wrote that there had been "great and unexpected progress in silk," which he felt would double each year until one hundred thousand pounds per year would be produced, as much as 40,000 people "can do." At the moment there was great need for "good wheels (the French call them mills) from Marseilles or Messina." Mulberries were deemed plentiful—"innumerable trees, which in four or five years will come to their perfectest."[186]

In speaking of the mulberries, Berkeley undoubtedly had in mind the considerable activity such as had taken place in Gloucester County. Here Thomas Walker had planted in excess of 70,000 trees and the Reverend Alexander Moray, near his "house in Ware Riv[er] in Mockjack bay," some 10,000. Moray in June 1665 was hoping "to reap good silk" within two or three years. He had improved the method of planting, he related, and now planned to set them "as curran[t]s and goosberries, so thick as in hedges." This would produce thick growth easily reached, factors that heretofore had been "the only obstruction of that work." The old method of gathering from trees entailed "losse of their time and gain." In hedges leaves would be young and tender and could be cut quickly with a "pair

[183]Sainsbury, *Calendar, 1661-1668*, pp. 98, 99, 110; *VMHB*, XVIII, 300-301, 409. Mary Newton Stanard (*The Story of Virginia's First Century*, pp. 242-243) relates that when Berkeley sailed for England in April 1661 he took a present of silk from Virginia to King Charles. He returned in the fall of 1662.

[184]A letter dated March 30 in the British Museum Egerton Manuscripts transcripts (No. 2395, folio 362) in the Library of Congress.

[185]Hening, *Statutes*, II, 202.

[186]*VMHB*, XVIII, 427, Sainsbury, *Calendar, 1661-1668*, pp. 290-291, 316.

of sissers." He had thought too of sowing some acres with mulberry seed and cutting it with "a sith."

Moray's thoughts extended to caring for the silkworm as well. He wrote:

> I have bethought also of a new way, for a few hands to serve many worms, and that more cleanly, than before . . . to separate unwholesome worms from healthfull, and by which a great many more may be kept in a room, than otherways upon shelves as is usual here, and how to kill worms with expedition, which here is a great difficulty, they lying sometimes 3 or 4 daies in the sun, before they dye, and being many inconveniences upon those, who have endevored the work, but of those things, as my experience shall confirm me, I shall afterwards inform me more at large.[187]

In 1666 the Assembly by its "act for debts and rates" attempted to evaluate commodities for the convenience of producers, creditors, and debtors. In this scale a pound of "wound silke" was made the equivalent of 200 pounds of tobacco or 20 shillings. In comparison, wheat was set at four shillings, or forty pounds of tobacco per bushel. For silk this was the same value placed on it in March 1658. For wheat it was a decline of one shilling.[188]

In July 1666 Berkeley, in a letter to Lord Arlington, spoke of the promotion of useful commodities and mentioned that considerable progress had been made in silk and flax. Here he mentioned too that a present of 300 pounds of silk had been prepared for the King. Such was mentioned about the same time by Thomas Ludwell, Secretary of Virginia, who described it as "the first fruits of their labours." Berkeley, in a letter to the Earl of Clarendon, mentioned that the Assembly had ordered it as a "present and sacrifice of their first fruits to" Charles II. Some delay ensued in the shipment of this silk, and it was not until 1668 that the King received this, perhaps, the best known, certainly the most publicized, proof that Virginia could produce silk. In the meanwhile the "glut of tobacco" grew worse and a cessation of planting in 1667 was projected, a condition that Thomas Ludwell observed was sure to "put the planter upon making more silk, flax, and other staple commodities."[189]

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[187]Letter, dated June 12, to Sir Robert Moray in *William and Mary Quarterly*, 2nd ser., II, 157-161.

[188]Hening, *Statutes*, I, 470, and II, 233.

Other values set in 1666 were:

"Indian corne shelled," per bushel	20 lbs. tob. 2s
"Oates," per bushel	30 lbs. tob. 3s
"English peas," per bushel	40 lbs. tob. 4s
"Indian Peas of all sort," per bushel	35 lbs. tob. 3s.6p.
"Barley," per bushel	35 lbs. tob. 3s.6p.

[189]Sainsbury, *Calendar, 1661-1668*, pp. 396, 400, 446; a letter of Berkeley to Clarendon, July 20, 1666, in the Bodleian Library, Clarendon Manuscript transcripts (No. 84, folio 230) in the

On July 22, 1668, Berkeley could write to the King that "Nowe that peace has given us some security" it was possible to send the long promised present of silk in expectation that it would reach him safely. He included too word about the prospects of silk production generally, pointing out that France, "not ful threescore yeares since" had begun to make silk and it was a source of "immense wealth" for the French. Virginia he pointed out was "more proportioned suddenly to produce this admirable commodity then France can be." Virginia needed skillful men to teach the processes, however, and Berkeley sought permission, which he did not obtain, "to goe into France to procure" them.[190]

Charles II, writing from Whitehall on November 25, 1668, graciously acknowledged the receipt of the present of silk. He told Berkeley and the Council that:

> Wee have received with much content the dutifull respects of that Our Colony in the present lately made us by you and the Councell there of the first product of the new manufacture of silke, which as a marke of our Princely acceptation of your dutyes and of the particular encouragement Wee resolve to give to your industry in the prosecution and improvement of that or any other usefull manufacture, Wee have commanded to be wrought up for the use of our owne person.[191]

As further encouragement Charles II, by writing directly, gave his thanks in his "owne Royall hand."

Words of praise from the King were well received and much appreciated by the officials in Virginia. Charles II, it appears, did use this silk in a personal manner. It was reported in a news letter, dated October 27, 1668, that the King "has ordered [the Virginia produced silk sent to him as a gift] . . . to be wrought in to bed furniture for his own use." John Evelyn, writing in 1670, related that "*Virginia* has already given Silk for the cloathing of our King; and it may happen hereafter to give *cloathes* to a great part of Europe, and a vast Treasure to our King: If the *Silk-worms* shall thrive *there* (of which there seems to be no doubt) the profit will be inexpressible."[192]

In 1669 the Assembly acted again to promote "the advancement for the making of silke" for the honor of the present and the future. The old

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Library of Congress; *VMHB*, XIX, 182, and XX, 34. As L. C. Gray has observed, the attempts to produce "staples" blossomed in periods of depression. ("The Market Surplus Problem of Colonial Tobacco," *William and Mary Quarterly*, 2nd ser., VII, 5.)

[190]Sainsbury, *Calendar*, *1661-1668*, pp. 594-595; Neill, *Virginia Carolorum*, pp. 322-325.

[191]Wynne and Gilman, *Colonial Records of Virginia*, Virginia Senate Document, Extra (Richmond, 1874), p. 97; Sainsbury, *Calendar*, *1661-1668*, p. 627.

[192]*Sylva, or a Discourse on Forest-Trees*, pp. 131-132; Stanard, *Virginia's First Century*, p. 243; Sainsbury, *Calendar*, *1669-1674*, p. 26; *VMHB*, XX, 199.

bounty of fifty pounds of tobacco for a pound of wound silk was restored.[193] Berkeley, in June of that year, promised a far greater present of silk within a decade. Later he went on to recount his difficulties, however, which were both technical and financial. He complained that his salary was insufficient to support his expenses, and again he requested the "customs of a ship of tobacco" so that he could visit England and while there go to the Continent to study sericulture processes in France and Italy. The King's reply was the same as it had been some years before. The customs on such a ship load of tobacco would be forthcoming when Berkeley could send a ship of 300 tons loaded with staple crops—silk, hemp, flax, pitch, and potash. This was despite Berkeley's plea that such staples were "not fully performed yet." Berkley's insistence that "he hath spent his whole tyme and estate in perfecting these great and beneficiall Comodityes" was not sufficient to persuade the Crown.[194]

In 1671 Berkeley again reported on progress to the Commission of Trade and Plantation and wrote on June 20 that he was sending "a Patterne [of silk] as we now make it." He continued that when the remainder in hand was wound he planned to send the King sixty or seventy pounds which was "made in my owne house [Green Spring] this year." It could not be sent at the time of the letter for it was "newly made" and consequently not ready. In answer to specific inquiries, Berkeley stated that they had "great hopes of silk," and if they but had skillful men, from Sicily, Naples, or Marseilles they could within "ten or fifeteen yeares" send 500 bales a year to England. It was the lack of skilled men and the inability to train them in the Colony which was the continual nemesis of this work.[195] It was reported in 1671 that: "Commodities . . . we never had any but tobacco . . . but of late, we have begun to make silk and . . . many mulberry trees are planted, and planting."[196]

In January 1672 Berkeley again repeated some of his former requests with, it seems, the same negative results. This time he specifically asked that the British consuls in Naples and Sicily be instructed to send some skilled workers into England for transfer to Virginia. Berkeley agreed to pay for their transport and annual employment as soon as they should arrive in the mother country. He still felt that if he had but six men to teach

[193]Neill, *Virginia Carolorum*, pp. 322-325; Hening, *Statutes*, II, 272.

[194]*VMHB*, XIX, 261, 348-350; Sainsbury, *Calendar, 1669-1674*, p. 27.

[195]*VMHB*, XX, 17; Sainsbury, *Calendar, 1669-1674*, p. 232; Stanard, *Virginia's First Century*, p. 243; George Chalmers, *Political Annals of the Present United Colonies from their Settlement to the Peace of 1763* (London, 1780), p. 326; *Virginia Historical Register*, I, 9, 11.

[196]Hening, *Statutes*, II, 514.

the right way to feed worms and to wind silk that unexpected progress could be made in a short time.[197]

Here the substantial seventeenth-century attempts to produce silk seem to end. After some seventy years of hopeful trial and periods of intense activity which were attended by partial success, the efforts on a large scale were allowed to lapse. Bacon's Rebellion and Berkeley's ultimate withdrawal from the scene may have been the principal reasons. In any case no hopeful prospects were given, it appears, in answer to the request from the home authorities in 1676 for information about the "present state of the Silk Trade What advantages or impediments do attend it?"[198]

This was not, however, the final act in the Virginia attempts to produce silk. Interest was to continue for the next two hundred years. The note of finality sounded by Thomas Glover in 1676 was too premature when he wrote in his *An Account of Virginia, its Scituation, Temperature, Productions, Inhabitants and Their manner of planting and ordering Tobacco* that: "I had almost forgot to metion their *Mulberry-Trees*, whereof they have good store about their Houses, These were planted at first to bred Silkworms, but that design failing, they are now of little use amongst them."[199]

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[197]*VMHB*, XX, 126-127; Sainsbury, *Calendar, 1669-1674*, p. 321.

[198]*VMHB*, XX, 250-251.

[199]A reprint from the *Philosophical Transactions of the Royal Society*, June 20, 1776 (Oxford, 1904).

A VOYAGE OF FISHING AND DISCOVERY, 1609

Edited by MARTHA W. HIDEN*

THE original settlers at Jamestown reached Virginia by a most circuitous voyage, which took five months. They sailed south from England to the Canaries, across the Atlantic to the West Indies, and then north to Chesapeake Bay. Besides being roundabout this route skirted lands belonging to Spain, the arch rival and natural enemy of England. Recognizing the need for a new route the Virginia Company in 1609 determined to "set out, one small ship, for discovery of a shorter way, and to make trial of the Fishing within our Bay and River."[1] On May 5 Captain Samuel Argall sailed from Portsmouth in the *Mary and John* "shaping his course South-South-West to the height of thirty degrees, leaving the Canaries a hundred leagues to the East."[2] With good winds he reached Jamestown on July 13, his actual passage being only nine weeks during two of which the ship was becalmed. After testing the Virginia waters where he found fish plentiful, Captain Argall returned home reaching England by November 23, 1609, after a most successful voyage.[3]

Captain Argall, though under thirty, had apparently already established a reputation as a mariner of experience and ability, else he would not have been selected to command the *Mary and John*. The next year he conducted Lord De La Warr to Virginia. Later in that year he made a survey of the Atlantic coast north of the Virginia Capes, which was "the beginning of the fishing voyages sent to the northward from Virginia every summer." Later events in his life such as his abduction of Pocahontas and his close connection with the colony at Jamestown, including a term as deputy governor, are too well known to need retelling here.[4]

John Cornelis of London who made application for the commission for the voyage owned five shares in the Virginia Company for which he had paid £62 10s. Like many others of the Virginia Company, he also belonged to the East India Company and had an interest in promoting trade with the East Indies. He married Elizabeth, the sister of Captain Nathaniel

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[1]*A True and Sincere declaration of the purpose and ends of the Plantation begun in Virginia. . . .* (London, 1610) reprinted in Alexander Brown, ed., *The Genesis of the United States* (Boston and New York, 1890), I, 342.

[2]*Ibid.*, I, 343.

[3]Don Pedro de Zuñiga to the King of Spain, Highgate, November 23, 1609, in Brown, *Genesis of the United States*, I, 332.

[4]Brown, *Genesis of the United States*, II, 815-816.

Butler. Captain Butler was in Virginia for a while, and on his return published in 1623 the pamphlet, *Unmasking of Virginia,* which was a factor in creating the bitter dissensions that marred the last years of the Virginia Company.[5]

Robert Tyndall, the third person named in the commission, was one of the intrepid group who sailed from Blackwell on December 19, 1606. He is assumed to have been a cartographer who assisted Captain John Smith and Captain Nathaniel Powell in making maps and charts of the area as the Company had ordered. The voyage with Argall was his second to Virginia, and his third was made the following year. The point on the north bank of the York River across from Yorktown now called Gloucester was formerly known as Tindall's Point.[6]

The commission is signed by seven members of the Virginia Company who because of experience in commerce and maritime affairs had been selected by the King to compose His Majesty's Council of Virginia resident in England.

Sir William Wade was clerk of the Privy Council and successively Ambassador to Spain, France, and Scotland. He invested £144 10s in the Company and was a member of the Council in 1606 and 1609. His father, Armigil Wade, a distinguished navigator, was called "The British Columbus."[7]

Sir Thomas Roe had invested £60 in the Company and was a member of the Council in 1607 and 1609. He had explored the Amazon River and went in 1615 as the first English ambassador to the Great Mogul, Shah Johan. This voyage was made in a ship of the East India Company commanded by Captain Christopher Newport who had left the Virginia Company and was then in the employ of the East India Company.[8]

Sir Thomas Smythe, the leading merchant of his time and for years treasurer and ruling influence of the Virginia Company, was one of the important figures of his day. He had invested £165 in the Company. He was also governor of the East India Company. "December 30, 1609, the King, Queen, and Prince Henry went . . . to the launch of the great Indian ship of above 1,200 ton, newly built by our East Indian merchants and had a bountiful banquet; at which the king graced Sir Thomas Smythe, the governor with a very faire chain of gold, in manner of a collar, better than £200, with a jewel wherein was the King's picture hanging at it, the king

[5]Brown, *Genesis of the United States,* II, 836, 862-863.
[6]Brown, *Genesis of the United States,* II, 1035
[7]Brown, *Genesis of the United States,* II, 1039-1040.
[8]Brown, *Genesis of the United States,* II, 984-986.

put it about his neck with his own hands, naming the ship The Trade's Increase."[9]

Sir Walter Cope, grandson of Sir Anthony Cope also a member of the Company, had paid the large sum of £215 into the Company's treasury. He was one of the leaders of his time in creating and developing England's foreign trade. He was a member of the Council in 1606 and 1609.[10]

Sir Robert Mansfield had been knighted in 1596 for gallantry at the capture of Calais and the next year went with the fleet to the Azores. A member of the Council in 1607 and 1609, he had invested £97 10s. in the enterprise. His ship the *John and Francis* made several voyages to Virginia. He was among those interested in Henry Hudson's voyage of discovery in 1610.[11]

Sir William Romeny [Romney] besides investing £170 in the Virginia Company was also prominent in the affairs of the East India Company. Like Sir Robert Mansfield he promoted Hudson's voyage. He was a member of the Council in 1606 and 1609.[12]

John Eldred, one of the principal citizens of London, invested £137 10s. in the Virginia Company and was a member of the Council in 1606 and 1609. He was among the first to attempt to open East India trade to English merchant ships. The advantages Portuguese, Spanish, Italian, and Dutch navigators had brought to their countries were goading to the London merchants who found themselves buying at fancy prices the imported articles their customers wished. Their desire to tap rich foreign resources at their point of origin and to import goods in their own ships led to the formation of the numerous merchant companies of the late sixteenth and early seventeenth centuries.[13]

A contemporary copy of the commission for the voyage of the *Mary and John* was acquired recently by the Library of Congress. This transcription was made from a photostat in the library of the Virginia Historical Society. In editing the commission spelling and punctuation have been modernized.[14]

Copia verbatim

WHEREAS MR. JOHN CORNELIS of the City of London, goldsmith, an Adventurer and Freeman of the Country and Company of Virginia,

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[9]Brown, *Genesis of the United States*, II, 1012-1018.
[10]Brown, *Genesis of the United States*, II, 862.
[11]Brown, *Genesis of the United States*, II, 941-942.
[12]Brown, *Genesis of the United States*, II, 987.
[13]Brown, *Genesis of the United States*, II, 884-885.
[14]For a literal transcription and an excellent discussion of the document see Dorothy S. Eaton, "A Voyage of 'ffisshinge and Discovery," *The Library of Congress Quarterly Journal of Current Acquisitions*, X (1953), 181-184.

hath desired to set out one ship called the Mary and John of Portsmouth at his own expenses of freight, victuals and other charges whatsoever for the discovery of a fishing upon the coast of America, between the degrees of 35 and 40 of northerly latitude, which lieth upon that part thereof called Virginia granted by His Majesty's letters patent to the Council, Colony and Company called the South Colony, and by virtue thereof appertaining to them. AND WHEREAS he hath offered to the Council here, for the finding of a new way to the Cape of Comfort, without fetching so southerly a course as hath hitherto been made, and for the avoiding of all occasions of color or pretense of offense to be taken by the King of Spain, by coming near, or touching upon any part of his Islands or Indies, whereunto he hath just title or quiet possession, (His Majesty being now in league and peace with him) to run in a direct course and line, and to beat it up the straightest and nearest way he may, which he projecteth may be performed by a southwest course, or by some point near thereunto safely and easily to the great commodity and comfort of our Colony, and great ease of charge in freight and wages expended in so long a course, as that by the West Indies, and for divers profitable and weighty reasons conceived by us: WE His Majesty's Council of Virginia having first considered his request and motives, in our private consultations, and consented thereunto have caused the same to be entered in our book of Orders, and conclusions of Court, and for the more speedy and orderly expedition and execution of this purpose we do give and grant this our commission to Mr. Samuel Argall appointed Captain of the said Mary and John, Whereby we do authorize and appoint him to set forward with his Company, Ship, and such Boats and Pinnaces as are seen fit for that service towards the coast of Virginia, and to shape his Course Southwest or near thereunto, and thereby to beat it up the straightest way he can, according to his offer made unto us, unto James Town in Virginia where our Colonies are now planted and not to fetch or touch upon any part of the King of Spain his dominions quietly possessed or rightly claimed. And being arrived there, he shall first deliver our letters and such other goods as we shall send to the President, Council or Cape Merchant of that Colony safely and orderly, And upon a bill of receipt thereof, and letters to us obtained under the hands and seals of the President and Council there, he shall presently without any further trade or traffic with our Colony, or any member thereof, or with any of our Savages within the Bay, except it be for ready money with our people, or to procure or hire any of the Indians to Assist or help them with such toys as they carry, proceed to their fishing, either within

the Bay or along our Coast or elsewhere from the Southerly point thereof, homeward, as he shall find most profitable for him. And having finished his purpose of Fishing and Discovery, he shall with all convenient speed return for England, and repair to the Treasurer and Council of Virginia resident in London, and give an account to them of his voyage, And deliver unto them all such letters, Cards or plots of Discovery, and Journals, as he or any with him shall obtain receive or make there, or on their journey, or whatsoever else shall be sent unto them, or to the several company, from the President, Council, Colony or any member thereof.

IN consideration whereof and for their better encouragement in performing this voyage, it is agreed unto and granted by us of the Council with the advice and consent of the whole Company assembled in Court, to give a bill of adventure to John Cornelis and his partners adventurers in this ship, of 500 pounds at the return of the same under our seals, Whereby he shall have full power, and authority to make Free by several bills to that sum, any or so many of his private Adventurers as have adventured with him 25 pounds or upward, ratably to all privileges and profits, as if it had been adventured in the general stock Provided that he have performed this Discovery intended and promised, and delivered our letters and fulfilled in reasonable sort this our Commission according to the true intent thereof and some testimony from thence obtained, or there made apparent unto us. And for their further safety in their expedition, we give full power and Authority to the Captain, Samuel Argall, and Robert Tyndall, Masters and Officers of the said Mary and John, to punish and reform all Mutinies, and disorders in any of their company, and to defend themselves against any person or native whatsoever that shall seek to interrupt their Journey outward or homeward, or to hinder their proceeding therein, And in their own defense only to make war upon any whomsoever, And this our Commission shall be their warrant therein. Given under our hands and seals the second of April 1609. Subscribed. W. Wade Tho. Smythe Tho. Roe, Walter Cope, Robert Mansfild, Willm Romeny, John Eldred. And sealed with a great seal having the King's picture and arms in red wax.

[Labelled on back:]
The copy of our Commission given under our hands and seal to John Cornelis, Samuell Argall and Robert Tyndall employed in the Mary and John in a fishing voyage to Virginia dated the 2 April 1609

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GREEN SPRING PLANTATION

by Louis R. Caywood*

In 1954 two commissions were created and organized to commemorate the 350th anniversary of the first permanent English settlement in America founded at Jamestown, Virginia, in 1607. The Jamestown-Williamsburg-Yorktown Celebration Commission was created by Congressional action and the Virginia 350th Celebration Commission was established by the General Assembly. Both commissions set up offices in the historic Travis House in Williamsburg and worked jointly on the celebration project. The law which set up the federal commission also provided for commemorating the flowering of Colonial Virginia culture at Williamsburg and the final winning of American independence at Yorktown in 1781.

As part of the original planning for the 350th anniversary of the founding of Jamestown, members of the two commissions projected the restoration of Green Spring mansion as one of the initial projects. The extensive original Green Spring plantation is now owned by Mr. Phillip Murray of Newport News, Virginia. Mr. Murray kindly gave permission for the excavation of the Green Spring ruins.

Work on the Green Spring project began on November 22, 1954, and ended on May 25, 1955, with the completion of the report. The costs of the excavations, shared by the two commissions, proceeded according to plan throughout the winter, often interrupted by severe weather. With the advent of spring the work progressed at a faster pace and the major field excavations were completed by the end of March. Throughout the work the writer found helpful assistance at every hand—in the commission offices, from the National Park Service staff, the various staff members of Colonial Williamsburg, in the College of William and Mary Library, and elsewhere.

The remains of the Green Spring mansion are located three and one-half miles north and slightly west of Jamestown. In the seventeenth century it was on the first carriage road in Virginia, which led from Jamestown to Middle Plantation, now Williamsburg. Because of its ever-flowing waters, Green Spring was the site of a village of the Paspaheghs Indians

*Mr. Caywood is superintendent of Ocmulgee National Monument, Macon, Georgia. His archeological excavations have included, in addition to Green Spring, a number of Hudson's Bay Company sites in the Pacific Northwest, the most important of which was that at Fort Vancouver National Monument, Washington.

long before Sir William Berkeley built the first Green Spring manor house in the fourth decade of the seventeenth century.

In the long period from 1607 to 1699 there were many governors of Virginia, but none better known or of longer tenure than Sir William Berkeley, who was both loved and despised by those he governed for the English Crown. He might well be termed the first gentleman farmer of Virginia and his plantation, adjoining the governor's land, was as fully developed as any in the colony in its period. It has long ceased to exist and its formerly extensive buildings have disappeared. It has through the years, however, continued to be a subject of interest and speculation. Those connected with the planning for the celebration year saw the importance of Green Spring and began to assemble the basic facts needed in any interpretive and development plan. The preliminary studies pointed out that more information was necessary—historical, archeological, and architectural.[1]

I

The appearance of Green Spring before excavations began, was that of a typical Virginia pastoral scene with a few brick walls of some of the dependencies (the outbuildings of the plantation) still standing. Fortunately, Mr. Murray had cleared the land surrounding the site of the Green Spring Mansion House and the ruins of the Ludwell-Lee House 300 feet to the north. The well-preserved walls of a large brick building to the northwest of the Green Spring foundations are known as the jail. To the southeast is a recently built brick springhouse from which flows the famous Green Spring.

Upon closer examination, a number of small mounds and shallow ditches were evident. The brick-lined walls of three basements and a few brick foundations could be noted. These evidences of the remains of the Green Spring structures were all that was left of the once most famous house in seventeenth-century Virginia. In fact these might not have been visible had it not been for the excavations carried on at the site by Mr. Jesse Dimmick in 1928 and 1929. At that time the three basements were fully excavated and a number of the brick foundations exposed and left open to the elements. Fortunately, the nature of the brick in these structures was such that it stood up fairly well over the years. Credit should be given to Mr. Dimmick's foresight in attempting to stabilize the brick walls by pouring a thin mixture of cement over the brick. Root growth, the elements,

[1]Jane Carson, "Green Spring Plantation in the 17th Century, House Report" (Williamsburg, 1954), p. 11.

and possibly amateur diggers did away with most of this covering by 1954.

The archeological work was divided between a careful examination of known foundations and features, and explorations for features not known. The Dimmick map[2] was used to determine the extent of the walls found by him. Since Mr. Dimmick uncovered only the tops of the walls, much additional information and many worthwhile artifacts were recovered when trenches were dug on both sides to the entire depth of the brick foundation walls. The excavation of the curved west garden wall on only one side proved a major undertaking, necessitating a four-foot wide and six-foot deep trench.

Since the period covered (1643-1797) represented more than 150 years of occupation at this house site, it was hoped that some of the excavation tests would reveal good stratigraphic sequences. However, rather disappointing results were obtained from the few locations where cultural depth was found. The artifacts fall well into the last half of the seventeenth century, with a few of earlier origin and many more of later times, showing continual occupation.

Much is known of Sir William Berkeley and his prominent role in seventeenth-century Virginia.[3] The physical appearance of his house and plantation at the time of his residence, however, is something else again. No period drawing, plan, or even an adequate word picture came to light in the old records. Consequently, the existing remains which lie underground are invaluable. The paucity of historical fact makes the interpretation of these even more difficult and challenging. It requires the skillful use of any tested speculations that can be made.

William Berkeley was born in London about 1608, the youngest son of Sir Maurice Berkeley, an original member of the London Company of 1606. William graduated from Oxford in 1629 and in 1632 was appointed one of the Royal Commissioners for Canada, in which office he won the personal favor of Charles I, who appointed him a gentleman of the privy chamber. He was one of the eight original Lord Proprietors of Carolina. His coat of arms appears on the Great Seal of the Lords Proprietors of Carolina.[4]

In August 1641 he was appointed Governor of Virginia and came to the colony in 1642. On June 4, 1643, he obtained by court order 984 acres

[2]Jesse Dimmick, "Green Spring," *William and Mary Quarterly*, 2nd ser., IX (1929), facing 128.
[3]Carson, "Green Spring" Plantation in the 17th Century, Appendix A.
[4]Samuel A'Court Ashe, *History of North Carolina* (Greensboro, 1908-1925), I, 50.

known "by the name of Green Spring." In 1646, when surveyed, the tract was found to contain 1,090 acres which was his holding until 1661, when it was increased by patent another 1,000 acres. In addition, he had the use of 3,000 acres of governor's land that adjoined toward the west and southwest, fronting on the James River.

At what time Berkeley built on his property is not specifically known; seemingly it was undeveloped initially. The house may have been started soon after the grant was received in 1646. It was probably completed by the time he resigned from the governorship in 1652.

During his second term as governor from 1660 to 1677, we know Sir William was conducting a fully developed plantation in the seventeenth-century manner. His activities were extremely diverse and would have required extensive development to accommodate them. His experiments in silk, rice, hemp, grapes, tobacco, and fruit trees were financed with considerable sums from his private funds. He had orchards and a vineyard, produced potash and timber products, and had horses and oxen. He had servants in number and entertained lavishly. In 1670, at the age of sixty-four, Sir William married Frances Culpeper Stephens who was thirty-six at the time. This event possibly prompted some expansion of the house. It was spacious enough to accommodate the General Assembly after Bacon burned Jamestown in 1676.

Sir William's estate passed to his widow, Lady Frances in 1677, who later married into the Ludwell family. It was used by this family for a century and a quarter—the remainder of the life of the Berkeley home. How much the various Ludwell owners and occupants added to or subtracted from the Berkeley structures is one of the difficult problems of this study. It could have been considerable or it could have been little, both in buildings and grounds developments.

For convenience in describing the archeological and architectural problems, the Green Spring structures have been divided into two parts and given names to designate these divisions. The term "Old Manor House" has been used for the original structure erected during the period of Sir William Berkeley. "Mansion House" has been used for the later additions which may or may not have been built during Sir William's time.

Three pictorial representations of Green Spring are known to exist. One appears on a recently discovered 1683 land survey found in the William Salt Library in Stafford, England. A rather rough sketch of Green Spring, dated as it is, and with an evident attempt to be accurate, is of extreme importance. It shows the building group with its diverse elements. The long

Mansion House without the ell can be attributed to Berkeley's time. This narrow building with a gable, not a hip-roofed end, and the arcaded porch, overlooking what was or was to be a great forecourt, is in existence. The roof appears to be covered with pantile at this time. The building to the right, square in suggested form, appears to conform with the excavated square building foundations of stone and brick that flanks the east end of the Mansion House.

In 1796 Benjamin Henry Latrobe was retained by William Ludwell Lee to study and make recommendations for the repair of the Green Spring Mansion House. As a result of these studies a water color (see frontispiece facing p. 3) and a drawing were made of the Mansion House. The water color showing the house in all its splendid detail was made from the southwest outside the curved garden wall. Latrobe even distinguished between the diamond-shaped and the rectangular panes of glass in the windows on the west side of the building. To the east stretched a line of three large dependencies and a small building which has the appearance of an outdoor water closet. To the south were the formal gardens and terrace enclosed by curved garden walls. Leading up to the house from the forecourt was the stairway with railings, the lower portion of which is not visible in the water color so it is impossible to determine the existence of a landing at that time. The shape of the stairway found during the excavations showed the existence of a landing at one time. In his pocket diary under the date of August 3, 1796, Latrobe wrote:

> The principal part of Greenspring house was erected by Sir William Berkeley who was Governor of Virginia the latter end of the last century. It is a brick building of great solidity, but no attempt at grandeur. The lower story was covered by an arcade which is pulled down. The porch has some clumsy ornamental brick work about the style of James the first. . . .

It is Mr. Lee's intention to pull down the present mansion and to erect a modest Gentleman's house near this spot. The antiquity of the old house, if in any case, ought to plead in the project, but its inconvenience and deformity are more powerful advocates for its destruction. In it the oldest inhabited house in North America will disappear, for it was built in the Year 16–. Many of the first Virginian assemblies were held in the very room in which I was plotting the death of Muskitoes.[5]

In the upper right hand corner of the water color is, "built 1640" and the numerals "79." It is not known whether these were placed there by Latrobe. If they were, then why did he leave the building date in his diary incomplete?

Although the Latrobe water color of 1797 appears to have been painted to represent the actual building, it raises some architectural questions. The hip-roof treatment of such a narrow building is rather difficult to accept. The construction of such a roof arrangement with double dormers over the foundations of the long building and the ell does not appear practical. The Latrobe building with its apparent greater width, dormers, windows, and cornice has the outward form and characteristics of Virginia buildings of the first half of the eighteenth century.

Latrobe's drawing of the Green Spring Mansion House dated March 1797, is an elevation of the south side as he probably proposed to restore it. This drawing shows the elimination of the double row of dormers by the addition of a third floor with a less slanting roof. Interesting is the flaring front stairway, the foundations of which were uncovered during the excavations superimposed over those of the old stairway with a landing.

A fourth bit of evidence of conditions at a specific time came to light because of a disaster in 1781 when, only a few miles from Green Spring, Lafayette and Cornwallis fought a battle on land belonging to William Lee. Both William Lee and John Paradise lost their slaves. The mansion at Green Spring was left in a "ruinous" condition.[6] Because of this incident a map of the battle area was drawn by Colonel Desandrouins.[7] This map is our only clue for dating that part of the plantation development called the Mansion House. We find that by 1781 it was in existence, had probably been for many years, but none of the Old Manor House is shown. To the east there are three dependencies as shown on Latrobe's water color.

[5]Thomas Tileston Waterman and John A. Barrows, *Domestic Colonial Architecture of Tidewater Virginia* (New York, 1932), p. 13.

[6]Archibald B. Shepperson, *John Paradise and Lucy Ludwell of London and Williamsburg* (Richmond, 1942), p. 136.

[7]Map of Battle of Green Spring 1781, drawn by Colonel Desandrouins, in Charles E. Hatch, Jr., "The 'Affair near James Island' (or 'The Battle of Green Spring') July 6, 1781," *Virginia Magazine of History and Biography*, LIII (1945), facing p. 172.

Airplane view of Green Spring site

Excavations at Green Spring in 1955

Also on the map there are three dependencies shown to the west. Neither Mr. Dimmick nor the author tested that area; so what remains beneath the surface is still unknown.

II

The first work done at Green Spring in preparation for the excavation project was to lay out a coördinate, or grid system, on magnetic north, to facilitate the mapping of the features to be found. The beginning point for the grid was selected to the southwest of the building area. Lots 100 feet square were laid out to the north and east of this point. Thus by measuring from two points on the grid system to the feature to be measured, the location was easily plotted by striking two arcs on the map. Their point of intersection was the location of the feature. In order to have shorter distances to measure, the area was divided into 50-foot coordinates. Coordinate sheets of paper with a scale of ¼ inch to the foot were made for each 50-foot square. All details of the excavations were recorded on these working sheets.

The elevation of Green Spring was not known; so an assumed elevation of 100 was taken on the concrete sill of the spring house. A topographic map was then made of the entire area with contours at foot intervals before excavations began.

Exploratory excavations were begun by digging test trenches at various locations along the coördinate lines but outside the building site area to determine the types of soils to be dealt with, the depth of overburden on the original soil layer, and the possible existence of unknown structures. The finding of the pottery kiln was the result of one of these tests.

The nature of the site divided itself into several sections around the main building foundations. To the south was a large entrance court into which came the main carriage road from Jamestown. This court was flanked by brick walls and by two sets of three small brick buildings to the east and west.[8] The entrance court probably contained some of the formal gardens and the carriage turnaround below the terrace. Connecting the entrance court to the forecourt was at least one stairway and perhaps more. The central portion of the terrace area or forecourt, which was almost completely tested, was flanked on the east and west by curved garden walls. To the north were the remains of the Mansion and Old Manor houses.

To the north and east of the building foundations was the mount which

[8]Dimmick, "Green Spring," map, *WMQ*, 2nd ser., IX, facing p. 128.

was not completely tested. However, from one small test trench and from general examination it appears to have been man made. Mounts exist at other places in Virginia, one being located in the Palace Gardens at Williamsburg, and were common in England at that time and earlier. Two brick structures had been built on or into parts of this mount. They were not tested so their uses were not determined. In the vicinity of the mount was the kitchen and the pottery kiln, both of which were completely excavated.

To the west of the building foundations were the structures known as the jail and the greenhouse or nursery. The arched drain leading from the basement of the jail was tested, but nothing more was done in this vicinity except to measure and plot in the jail. At the greenhouse the walls were outlined and the structure was plotted on the map.

Just to the east of the Old Manor House was a large open trench or ditch dug by Mr. Dimmick as a result of his checking of the east house drain. It was found that this entire area had at one time been a natural drainage course leading from the area north of the houses, hence the placement of a brick drain here. This natural depression was later used over a long period of time as an area for the disposal of refuse and garbage. It was rich in artifacts, all apparently from the time of the Mansion House. Tests just east of the east curved garden wall revealed one large trash pit of the period of the Old Manor House. Very few artifacts were found in this deep pit.

No testing was done due west of the Mansion House. It was realized at the time that foundations probably existed because three buildings are shown there on the Desandrouins' 1781 map of the Battle of Green Spring.

The Old Manor House consisted of eight or nine ground floor rooms, two of which had room-size basements.[9] The largest of these basements may well have been beneath a large central hall. On either end of this basement was a row of three rooms running east and west. Description of this section of the building foundations, shown as "C" and "K" on the accompanying map, will begin with the paved court and progress clockwise.

According to an undocumented inventory the original Berkeley Mansion contained six rooms, as many closets, a spacious hall and two passages, with garret rooms.[10] The similarity between the actual number of rooms and the number listed would make it appear that the source meant the original or

[9]Louis R. Caywood, "Green Spring Plantation Archeological Report" (Yorktown, 1955), Map No. 3.

[10]Edward D. Neill, *Virginia Carolorum* (Albany, 1886), pp. 204, 379.

first house. At least it would much better fit the Old Manor House than the later Mansion House which had many more rooms.

The brick paved area appeared to have been a room originally which measured 22 feet wide by approximately 27 feet long (east and west). The foundation of this room had been laid of two courses of brown iron sandstone on which mortar had been placed before laying up the first course of brick for the wall itself. The original room had a much larger area because the construction of Room M3 of the Mansion House had cut off the west end which undoubtedly contained the fireplace. This is evidenced by the fact that portions of the stone foundations with bricks in place were found within the confines of Room M3. The last use to which this room was put was as a paved court without walls but probably roofed. It had been paved with bricks set on edge, stone paving blocks, and small Dutch bricks. The entire area, including that over the walls had been paved as is shown by the fact that where the original walls were no longer serviceable they had been replaced with brick paving. An interesting feature of this paved area was that in the northeast corner there had been provision for the disposal of slops, waste, dregs, etc., into the beginning of the Mansion House drain.

An interesting feature of the next room to be described was the floor paving of 8½ inch square paving tile, one inch in thickness. Dimmick noted this as an "open area tile paved." In some places brick had also been used as a fill-in for paving. The room measured 16 by 19 feet with brown sandstone foundations on the west and north sides and part of the east side. Brick set in mortar surmounted the stone foundation showing that it had been a room and not an open area. The floor level was 2.6 feet higher than that of the large central basement.

The room forming the northeast section of the Old Manor House contained a number of striking features. The inside measurements are 14 by 16 feet. In the southeast corner, on the east and south walls, the foundations go to a depth of 3½ feet. The east wall is 3 feet thick above this deep section. Since there is no other location in any of the foundations where such a large section of brick was placed, it would appear, from a study of the ground after excavating, that a natural depression or drainage ditch had originally existed here. Foundation strength was necessary for the probable construction of a tower in the east wall of this room. At least the shape of the foundation suggests such construction. A similar projection also occurs in the room forming the southeast corner of the Old Manor House. Such a structure conforms to a pattern which is typical of an early period of architecture in England and certainly places the Old Manor House

as the earliest of the Green Spring construction.[11] The east drain was found leading from and forming a part of this tower foundation. A study of Dimmick's ground plan shows that each of these possible towers had projections in their room. Only fragments of these were found. Another important feature in this northeast room was the corner fireplace, built into the northwest corner of the room. The brick was free and not bonded into the walls of the room. There was no brick hearth nor any evidence of where the original floor level had been. The room appears to have been floored with a natural clean yellowish marl which packs very hard.

The long room east of the central basement measured 16 by 22 feet inside. From very slight evidence found next to the east wall it is possible that the room originally was brick paved in a diagonal pattern.

The southeast corner room of the Old Manor House appears to have lost some of its foundations. This room and the east garden wall rested on a hard knoll that projected toward the spring house. The foundations of this room, the adjacent room to the west and the east garden wall all had disappeared. In fact the disappearance was so complete that not even the trench in which they might have been placed could be detected.

The southwest corner room of the Old Manor House was very similar in construction to the northwest corner room. The foundations of only three walls were found, the south, west, and north. Although these foundations were apparently uncovered by Mr. Dimmick, only the north wall was shown on his ground plan. The foundations consisted of two courses of brown iron sandstone slabs found locally in river laid strata. This stone, called swamp pudding, is rich in iron and was used by the colonists for foundations and also for complete structures.

A fireplace had been built into the west wall. The north wall consisted of the stone foundation and one course of brick laid soldier style. Possibly Dimmick failed to show the other walls on his plan because there is no evidence of brick or mortar having been placed on the stone. A well-built cellar with a flight of six steps had been constructed in the center of this room. The top step was the original brick floor level of the room. Whether the cellar was ever used remains a question because in its southeast corner was a pile of clean white sand mixed with fragments of oyster shell as though it was under construction when abandoned. Dimmick did not find this cellar which was rich in artifacts, mostly broken bottles, fragments of glazed Dutch fireplace tile, delft ware, and metal objects. Brick and plaster

[11]James Gibbs, *A Book of Architecture* (London, 1728), plate 56.

in great quantities which appeared to have been in a fire also were found. The plaster had been placed on wooden laths which had burned away. The brick flooring of the cellar was very well laid of tile measuring 8½ inches square by 2 inches in thickness, laid on an inch of mortar of very good quality with good mortar joints. Many of the bricks, 6½ inches square by 2¼ inches in thickness, found in the cellar had fallen from the floor above or been dumped there after abandonment.

West of the large central basement of the Old Manor House was a small basement room measuring eleven feet square on the inside. The floor level was the same as that of the large basement but was unpaved. Dimmick had partially excavated this room to expose the east garden wall, which had been built over trash fill at a later time. In completing the excavation of the small basement a very good collection of artifacts was found including some iron tools. A mixture of lump coal and coal dust was found on the floor of this room as though it had been used as a furnace room at one time. No evidence of a stairway was found. The common wall between it and the large basement had been set 13 inches deeper into the ground than was any of the remaining wall of the large basement.

The large central basement had been completely excavated by Dimmick who found many artifacts in the fill. Except for two small cobbled sections, the floor consisted of bricks laid on edge on each side of a central dividing line running the long way of the basement. A brick stairway led in from the southeast corner. In checking breaks made in the brick paving four large post holes were found. Each measured about one foot in diameter and at one time each pair probably supported a large horizontal timber on which was laid additional timbers to support the floor of the "spacious hall."

What events took place in connection with the life of the Old Manor House are not known from any extant records. Archeological investigations gave a few leads as to its situation and what might have happened during its lifetime. After abandonment the three cellars were filled with trash and debris and the curved east garden wall was built over two of them.

In the numerous test trenches and pits excavated around the east end of the terraced area quantities of broken brick, mortar, plaster, tile, and pantile were found. The plaster had been applied on wooden laths which would bring up the possibility that the original house had been built of wood above stone and/or brick foundations. At least part of the Old Manor House was of this type of construction. Other parts may have been of brick

construction. Much of the plaster found buried in the trash areas and beneath the terraced forecourt as fill showed evidence of fire. From this we may be positive that at one time fire totally or partially destroyed the Old Manor House. This does not seem to be an uncommon end to houses of that period as many of the Jamestown houses suffered the same.

The Mansion House has long been thought of, since its earlier excavation and since its study by specialists on seventeenth-century colonial architecture, as the Berkeley residence. I am sure that we would all like to consider this true, and it may be that the Mansion House was partly built during Sir William's residence at Green Spring, especially after the evidence shown in the 1683 sketch. At least Lady Frances, in 1678, one year after his death, thought it was "the only tollerable place for a Governour."[12] From lack of evidence we may imagine that Sir William, before his marriage to Lady Frances in 1670, must have had a new feeling of social importance and could well have built a new house or rebuilt or added to the original structure. There is no documentary evidence to prove that he did build the Mansion House, but there is plenty of evidence from the test excavations to prove that much razing (perhaps from fire—burned bricks, plaster, and pantile) took place and of course rebuilding must have resulted, but again no records. Lady Berkeley's account of the house in 1678 in her letter to Sir Danby would indicate that the building, thirty years after its initial construction, was not in good repair.

The Mansion House finally consisted of four ground floor rooms, a back porch, a gallery or arcade, a front porch, and a drainage system. Proof that the Old Manor House existed, at least in part, at the time of construction of the three rooms, M1, M2, and M3, is evidenced by the fact that the drainage system started at the northeast corner of the paved court, ran along the north wall until it reached the northeast corner of Room M2, where, as an integral part of the construction, it ran across the central part of the house, beneath the porch and ended at the catch basin. All of the construction of these three rooms, *except the east end of Room M3*, show the use of the same type of mortar, a yellow marl mixed with burned oyster shell.

The construction of Room M4, the gallery, and the east end of Room M3, all are of later vintage according to the mortar used, a white oyster shell mixture.

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[12]Letter from Lady Frances Berkeley, Green Spring, to Sir Abstrupus Danby, June 27, 1678; in the Cunliffe-Lister Muniments, Bundle 69, Section 11, at Bradford, Yorkshire, England. Microfilm copy in Virginia Historical Society.

The foundations of the Mansion House are massive in construction, indicating that considerable wall height and brick construction was contemplated.

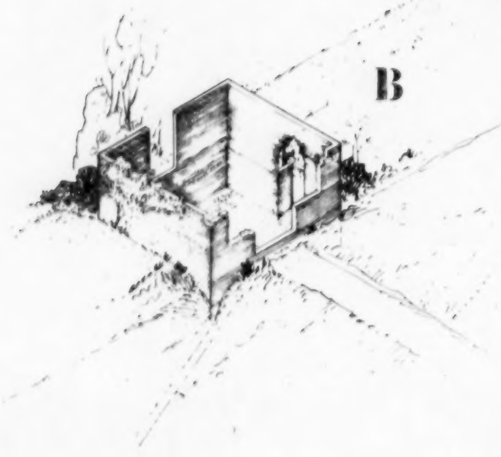
The pottery kiln was discovered as a result of test trenching. The first indication was the finding of two courses of brick foundation on the small knoll to the east of the main house foundations. The weather was extremely bad at this time of the year (in February) and the men had to work out the perimeter in mud and ice. The pile of broken pottery was found and removed from in front of the kiln at this time (see illustration). Part of the kiln itself was uncovered, but rain, snow, and freezing weather made it impossible at that time to continue the work. Later, drainage trenches were made from the front of the kiln and from the east side by removing part of the foundation.

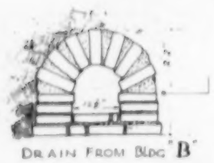
The complete depth of the fill over the floor of the kiln was 28 inches. The first four to six inches from the top comprised an artifact layer containing nineteenth- and twentieth-century nails, nineteenth-century blue underglaze transfer-printed Staffordshire pottery, eighteeth-century German salt-glaze stoneware (blue and purple enamel decorations on gray body), hand-

FOUNDATIONS OF GREEN SPRING
-JAMESTOWN AREA-

C.R. CAYWOOD ARCHAEOLOGIST.
DRAWN BY A. LAWRENCE KOCHER

BRICK SIZE BLDG "B"

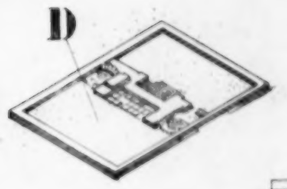

B


DRAIN FROM BLDG "B"

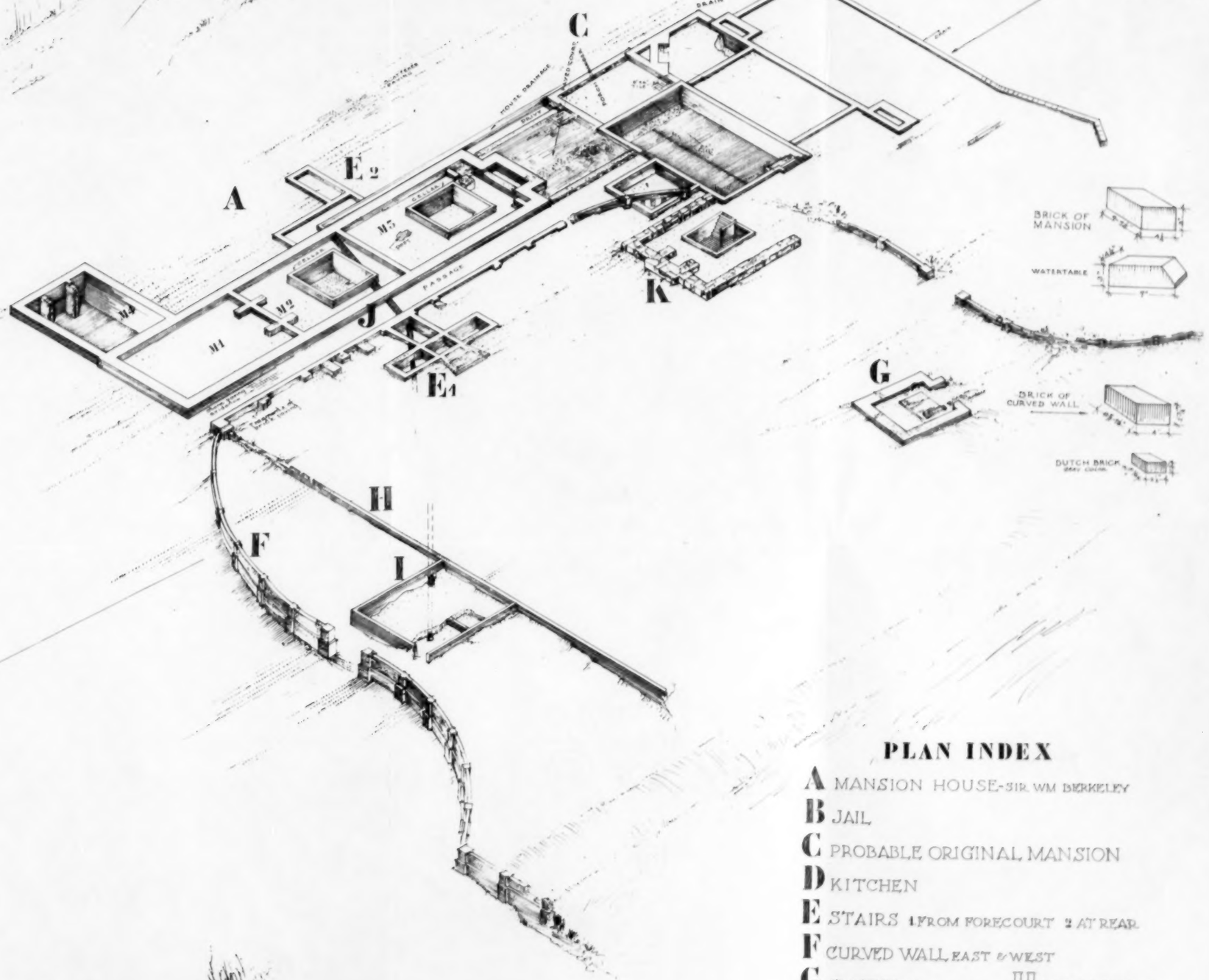
WALL AT RIGHT

PAVING STONE IN GREENHOUSE

N


D

SECTION OF DRAIN



L

PLAN INDEX

- **A** MANSION HOUSE-SIR WM BERKELEY
- **B** JAIL
- **C** PROBABLE ORIGINAL MANSION
- **D** KITCHEN
- **E** STAIRS 1 FROM FORECOURT 2 AT REAR
- **F** CURVED WALL EAST & WEST
- **G** SMITHERY-PROBABLE **III** EARLY WALL
- **I** CATCH BASIN- END OF DRAIN
- **J** GALLERY UNDER PORCH
- **K** STONE FOUNDATION WITH CELLAR
- **L** GREEN HOUSE

decorated eighteenth-century Staffordshire earthenware, and blue shell and feather edged nineteenth-century English earthenware.

Below this top six inches was a sterile layer from eight to ten inches in thickness consisting of a yellow clay similar to that used to build up the mount. The last twelve to sixteen inches within the kiln consisted of brick fallen from the arched roof, broken earthenware, and "bats." It was estimated that the arched roof had an inside height of seven feet. Evidence of a four-inch wide flue was noted between the arched roof and the south wall. The opening, or eye, through which the firing material and unfired vessels had been placed, measured more than four feet in length and two feet in width. In the kiln as well as outside were found great quantities of broken pottery and "bats." The latter were similar to roofing tile found at Green Spring and Jamestown except that each had a lug added at one end. They had been used as rests on which the pots were placed during the firing period. Often they were misshapen and glaze covered and sometimes the imprints of the pottery rims could be seen. This native Virginia earthenware consisted of unglazed and undecorated red wares as well as pieces which had been glazed inside to make them impervious to liquids.

The age of the kiln is undisputed as it falls into the period of earliest occupation. Pottery from the kiln was found in the lowest deposits of the early trash pit associated with bottle fragments dating from 1660 to 1680. It was important as one of Virginia's early industries; and to date the only seventeenth-century kiln which has been found in the state.

The greenhouse has a three-foot thick original wall still standing showing two periods of construction. It consists of an inner or back wall with pointed mortar joints and a later plastered wall. A broken piece of pipe stem found in one of the joints of the plastered wall dates its construction as being in the second half of the eighteenth century. The second wall appears to have been built for added strength and insulation. This structure consisted of two rooms, the smaller of which was the furnace room. The furnace base was all that remained. Since it weighed about 350 pounds and measured 27½ inches by 31 inches by 3 inches in thickness no one had ever bothered to move it.

Building D, to the east of the Old Manor House, originally was used as a kitchen and bake house. In the Latrobe water color it is shown with its single central chimney and two south doorways. According to the type of brick and the method of construction the kitchen appears to belong to the seventeenth century. However, no artifacts of this period were found within its foundations. In the west half of the building a considerable

quantity of iron trimmings and coal dust were found. Apparently, the last use to which the building was put was that of a blacksmith shop.

To the southeast of Building D in Latrobe's painting appear two more structures. No evidence of these was found, but that they were in evidence as mounds is apparent in the photograph made during the studies of Messrs. T. T. Waterman and John A. Barrows.[13] After 1932 a well surfaced road was constructed between the springhouse and the southern edge of the mount which totally removed any evidence of these two structures. From this we are reminded that all surveyors and road construction engineers should thoroughly study their rights-of-ways before construction begins, to prevent the destruction of important historic remains.

Still further east and beyond the fence in Latrobe's painting may be seen the wall of another structure. By orienting the painting with the ground plan of the excavation and letting one's imagination go, the remains of the arched vault and the flue of the pottery kiln can be seen in their proper location.

Building G was carefully excavated, but its use was never determined. Some sort of a brick structure was found within the massive foundation walls. On the north end was a large hearth. Mr. A. Lawrence Kocher has suggested on his plan that it was used as a blacksmith shop, but no evidence for this use was determined as in Building D.

This building does not appear on the 1781 map. It does not fit into the plan of the Mansion House and gardens. Nothing found during the excavations gave any evidence of what it was used for. The method of construction and the mortar are not similar to any other construction at Green Spring, so its use will have to remain unknown for the time being. Its foundations are seen in the Latrobe painting.

On the south side of the Mansion House was a passage or arcade (J) stretching the length of the house. This was built of brick arches and supported a porch along the second floor. The foundation of the arcade was built at a later time and appears to have had a number of buttresses to help support it.

To the back of the house a stairway (E2) led up to a short porch on the north side. Entrance to one or two rooms probably led off this porch.

Cellars were found in Rooms M2 and M3 during the excavation of the Mansion House. Both appear to have been late additions. The one in Room M2 was completely brick lined with a brick floor sloping to a drain

[13]Waterman and Barrows, *Domestic Colonial Architecture of Tidewater Virginia*, p. 10.

opening in the east end. During its construction a part of the house drain was cut through. Apparently the drain had been abandoned and the covering bricks used elsewhere. The cellar in Room M3 was also brick lined but had a well finished floor of hard gray clay, above which was an inch of clean white sand. Both cellars were full of brick, plaster, and slate roof tiles from the razed Mansion House. Although Latrobe drew a basement plan of Green Spring[14] and designated the room uses, he did not show cellar entrances. Because of the drain in the one cellar it may have been used for ice storage. One of the cellars undoubtedly held the wine supply.

When Sir William Berkeley came to build at Green Spring, a narrow spur of high, natural ground overlooked the spring. On this elevation was built the Old Manor House which closely resembled the country manor houses of sixteenth-century England. Green Spring certainly was not illustrative of the houses of seventeenth-century Virginia because the period of construction preceded the days when large slave holdings were common. During Sir William's day the land was cultivated on a system of small farms. It was after Governor Berkeley's time and not until around the second quarter of the eighteenth century that slavery became the basis of the economic life of the colony. The great plantation houses of Tidewater Virginia were the result of this new economy. The 1683 map clearly shows the number of farm holdings between James City and Green Spring plantation, each with its small dwelling.

As the years passed landscaping activities helped to shape the area around the house into a more formal unit. Some terracing undoubtedly took place during the time of the Old Manor House. An early garden wall (H) may have been one of the results of this period. However, by the time the Mansion House was being built there was a terraced area in front of it as far as wall H, but 22 inches lower than the present surface. All of the burned brick, pantile, and plaster from the Old Manor House was used to build up this lower terrace. Construction then took place on the Mansion House, the front and rear stairways, the central drain, and a catch basin (I) outside of wall H.

The final development at Green Spring was the addition of Room M4, the east end of Room M1, probably the arcade (J), the abandonment of the rectangular front stairway with landing and the building of the curved or flared stairway to replace it. At this time the central garden wall was abandoned and the curved east and west garden walls and gates were added.

[14]Ground-floor or basement plan of Greenspring, James City County, Virginia, undated, Ludwell-Lee Papers at the Virginia Historical Society.

The last landscaping development at Green Spring was a tremendous earth moving project which raised all of the forecourt twenty-two inches and added the terrace west of the west curved wall. The area north of the greenhouse appears to have originally been another spur of ground. How far it reached toward the greenhouse is not known, but the adjacent terrace seems to be mostly artificial.

Green Spring has long remained buried but its traditions are still a part of the lives of all Americans and particularly Virginians. It should arise again from its dust and ashes as an integral part of Virginia's history. Its importance lies in the fact that its excavation has added an intriguing page to the study of colonial architecture. This centennial year will afford an opportunity for thousands of people to review again the beginnings in America of our great heritage. The Jamestown Festival will highlight the life of the first successful English settlement. One of its permanent accomplishments should be a dignified and lasting memorial to this important seventeenth-century colonial site.

NEWS FROM VIRGINNY, 1644

Edited by JOSEPH FRANK*

THE massacre of several hundred Virginians by Indians in April 1644 received scant notice in contemporary English newspapers. Yet, strangely enough, a year after the event *Mercurius Civicus*, a London weekly which usually ignored items that did not deal directly with the English Civil War, printed a relatively full account of the dissensions in the colony at the time of the attack, as well as of the precautions taken to prevent subsequent massacres. More interesting, however, is the fact that the letters reprinted in *Mercurius Civicus* see events from a Puritan point of view. Thus the opposition of the Virginia Puritans to the Royalist Governor Sir William Berkeley is evident, as is their resentment at a commission from King Charles I empowering the Governor of Maryland to undercut those businessmen who were the backbone of colonial Puritanism.

In addition to their own interest, these letters cast a revealing sidelight on the early history of English journalism. During the first twenty years of their existence English newspapers were so fearful of the government's heavy hand that they printed only foreign news. Not until the eve of the Civil War, late in 1641, did an English newspaper dare to deal with domestic events. But by 1645 a press that was at once intensely concerned with national news and partisan in presenting it had begun to flourish. Since London was not only the center of English printing but the hub and source of Parliament's strength in the battle against the King, the majority of these newspapers were anti-Royalist.

Of the anti-Royalist newspapers of the mid-1640's *Mercurius Civicus* is significant for three reasons. First, its editor paid repeated lip service to his special concern with London news, and though his paper seldom differed from its competitors in content, it did make occasional pretenses of being a local rather than a national newspaper. As such, it was the first of its kind. Second, it was the earliest illustrated newspaper, despite the fact that the woodcut portraits which decorated its title-page were crude and sometimes unrecognizable. Third, the editor of *Mercurius Civicus* was more careful than most of his contemporaries to distinguish between fact and rumor, to avoid fantasy and wishful thinking. His comparatively rare departures from such journalistic honesty during the three and one-half years that his paper

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survived usually involve brief accounts of miracles in which a God-fearing Puritan is helped or a blasphemous Cavalier smitten. The letters reprinted below, though they do not concern London and though they were not accompanied by any picture, in a sense epitomize mid-seventeenth-century Puritanism, English or American. The first letter is shrewd and practical, the last credulous and devout. Certainly the combination of hard-headed anti-Royalism and rewarded piety helped to convince the editor of *Mercurius Civicus* that he had room for the following news from Virginia and Maryland in his issue No. 104, for the week of May 15-22, 1645.

I doe not usually acquaint you with any forraine intelligence, conceiving the affaires at home to be more lookt after, yet haveing this weeke received some matters of importance in reference to this Kingdome in divers letters from Virginy, I shall for once give you a relation of their contents, which are thus:

We are still troubled with the Indians upon the frontier part of the Country, and therefore wee are now providing three forts in the middle of the Country being in the Kings Territories, which is not far from us, that so we may have a power amongst them able to destroy them and to deprive them of their livelihood. They lately in a treacherous manner cut off 400 of our people, they have not courage to doe it otherwise: we take this course now that so wee may follow our businesse in the summer. How ever the crops we make now cannot be so great as they have bin, and I think we shall be at the charge of halfe our labours to maintaine these forts, and the Souldiers at the middle plantation which is a narrow passage the Indians have into the Forrest, this is onely our charge that dwell on the Northside of *Jameses* River, the people on the other side are to deale with the Indians there: This way though chargeable is thought most convenient to extirpate and subdue this people that doe much annoy us: they are so cowardly that ten of ours will make an hundred of them run away. We are at peace among our selves and have beene so ever since the massacre; Sir *William Barclay* [Berkeley] went for Bristoll and left Master [Richard] *Kempe* his Deputy and is not yet returned: It is my opinion that the massacre (though a judgement) did divert a great mischiefe that was growing among us by *Sir William Barclay's* courses; for divers of the most religious and honest inhabitants, were mark't out to be plundered and imprisoned for the refusall of an Oath that was imposed upon the people, in referrence to the King of England. It was tendered at mens houses, the people murmured, and most refused to take it: Those few that tooke it did it more for

feare then affection; so that it is the opinion of judicious men that if the Indians had but forborne for a month longer, they had found us in such a combustion among our selves that they might with ease have cut of[f] every man if once we had spent that little powder and shot that we had among our selves. I must not omit to give you notice of the governour of Mary-lands commissions lately brought hither in the Bristoll ship, though it may be you have already notice of [it] in *England*: The governour of Mary-land very tenderly discovered a commission that he had from His Majesty to take the *London* ships; to seize upon all debts due to *London* Merchants, to build custome-houses, and to receive the custome of Tobacco heere, and also to erect Castles and build Forts for the defence of the Country, and out of this revenue hee was to pay the governour of this Colony 2000 £. The Assembly seemed to comply with him and pretended the accomplishment of all his desires, and when they had gotten as much out of him as they could they seemed to commend the ingenious contrivance of the businesse, hee replied that [he] was the only agent in the businesse himselfe, which they tooke good notice of, withdrew themselves, dissolved the Assembly, but published a Proclamation that all ships from *London*, and elsewhere should have free Trade, and so [they] departed leaving him and his commissions.

Since the massacre because men should not be disabled to defend themselves, and their Plantations, it was thought fit to make a Law that no mans servant, his corne, or Ammunition should be taken in execution, but when it shall please God [that] we shall suppresse our enemy, this Act will be repealed.

Certaine newes is brought hither by a credible person, That [Richard] *Ingle* hath taken and plundered all the Papists except the governour of Mary-land, and some few that are gone away among the Poluxant Indians for refuge, and that he hath sent 40 men by land, and 60 by water to fetch them by violence.

I should now leave the forraigne newes were it not that upon the day of the execution of the massacre upon the Christians by the Indians there hapned a great wonder (which to many may seeme incredible, and the rather for that it is related at so great a distance from this Kingdome; and indeed there are some people so criticall that they will believe no more then they see of the affaires of this Kingdome, and much lesse further of[f]: yet for the satisfaction of such as are desirous, I shall onely set down the words of the Letter comming from an honest and knowne hand in that Plantation, to a person of good repute in this City, Gods goodnesse hath

beene lately very eminent in delivering me and my family from the Indian massacre. Upon the first day of April my wife was washing a bucke of clothes, and of a sudden her clothes were all besprinkled with blood from the first beginning to the rincing of them, at last in such abundance as if an hand should invisibly take handfuls of gore blood and throw it upon the linnen. When it lay all of an heape in the washing-tub, she sent for me in, and I tooke up one gobbet of blood as big as my fingers end, and stirring it in my hand it did not staine my fingers nor the linnen: Upon this miraculous premonition and warning from God having some kinde of intimation of some designe of the Indians (though nothing appeared till that day) I provided for defence, and though we were but five men and mistrusted not any villany towards us before: yet we secured our selves against 20 savages which were three houres that day about my house. Blessed be the name of God.

GENEALOGY

HENNING TEMBTE

by MARY DEAN CLEMENT*

CAPRICES of history have all but lost us the life of the man who bore the unique name of Henning Tembte. Here was a man who achieved some little prominence in eighteenth-century Maryland, Virginia, and North Carolina. He was a doctor, planter, merchant, civic and church leader, a man who left his imprint upon his times and upon subsequent times. But nothing has been written of him; even specialists in local history regard him as an unknown person to whom isolated references sometimes occur. Yet it is not difficult to see why there are so few references to Tembte in the histories of the times. His trail has been obliterated in large part by the destruction of the most direct records relating to him, and the remaining trail has been blurred by mistakes made in spelling and indexing the unusual surname.

The name Tembte has given trouble to numerous clerks and editors, ancient and modern. It is "such a strange name, which nobody except his family and descendants could spell."[1] Contemporary misspellings were of the phonetic variety, Temty, Tembtey, Temptey. In the nineteenth century the name, which had become a feminine given name, was confused with Tempy, Tempty, abbreviated forms of the name Temperance. Twentieth-century transcribers, coming across the totally unfamiliar word in old documents, have carefully and thoughtfully recorded Temble or Temple, or else have imaginatively rendered Lembtey,[2] Tombleys,[3] and even Jenetete.[4] There is no standard history or reference book which spells Tembte's

*Miss Clement is a mathematician by profession; she holds a Ph.D. degree from the University of Chicago, has taught at the college and university level, is now a senior mathematician at the Institute for Air Weapons Research, University of Chicago. She has indulged a lifelong interest in Southern history, and spends many of her vacations delving in libraries, courthouses, and graveyards. This paper, her first in the field of history, weaves together some of the facts she has thus uncovered.

[1]Letter from the late Robert Henning Webb, Charlottesville, Virginia, to Mrs. A. E. Clement, Nashville, Tennessee, dated January 8, 1952.

[2]This is the form which appears in the *Virginia Historical Index*, Earl Gregg Swem, comp. (Roanoke, 1934-1936), II, 49, referring to *Virginia Magazine of History and Biography*, VII, 213.

[3]Fred A. Olds, *An Abstract of North Carolina Wills* (Oxford, N. C., 1925), p. 147.

[4]*Marriage Bonds of Southampton County, Virginia, 1750-1800*, Blanche Adams Chapman and Catherine Lindsay Knorr, comps. (Smithfield, Va., 1948), p. 26.

name correctly.[5] Even in that invaluable source of information, *The Vestry Book of the Upper Parish, Nansemond County, Virginia, 1743-1793*[6] the editor chose for the indexing that version of the name which was affected by a clerk of villainous spelling, rather than that which was used by the clerk who was Tembte's own son-in-law. Any question as to the correctness of the spelling Henning Tembte is answered by the overwhelming evidence of family tradition, plurality of this spelling in contemporary court recordings, and absolute consistency in the few remaining original documents.

It has been a challenging problem in reconstruction to try to circumvent the loss of records, to collect diverse data over a wide region, and to piece together from the resulting fragments a picture of the life of Henning Tembte and his family.

As reconstructed, the life of Henning Tembte may be summarized as follows. He was born about 1700, place and parentage unknown. He married, about 1730, Elizabeth Sherwood, daughter of Daniel Sherwood of Talbot County, Maryland. Elizabeth was born about 1708, died prior to 1750. They had three daughters: Mary, who married first Richard Webb, then Thomas Fisher; Elizabeth, who married first Malachi Murden, then Edmond Daniel; and Margaret, who married Edward Riddick. Tembte and his family were living in Nansemond County, Virginia, by 1744, when he was already established as doctor and active member of the community. For the next twenty years he led a full life, practicing his profession, participating actively in church and civic work, acquiring land both in Virginia and in North Carolina, engaging in extensive mercantile business. Although his interests were widespread geographically, Tembte long kept his residence in Nansemond County, Virginia, maintaining a plantation which can be located with some certainty as lying in the fork of the western and southern branches of the Nansemond River. This was his home until 1765. At that time he disposed of much of his property and moved his residence to Halifax County, North Carolina, at which place he died in 1771.

Since most of Tembte's active life was spent in Nansemond County, Virginia, the burning of the Nansemond court and land records[7] destroyed

[5]For example, the name appears as Henry Temple in Bishop William Meade, *Old Churches, Ministers, and Families of Virginia* (Philadelphia, 1857), I, 289. See also footnotes 2, 3, 4.

[6]*The Vestry Book of the Upper Parish, Nansemond County, Virginia, 1743-1793*, Wilmer L. Hall, ed. (Richmond, 1949). This reference is hereafter cited, in footnote and text, as *Vestry Book*.

[7]Three fires, in 1734, 1779, and 1866, have destroyed virtually all public records of Nansemond County prior to the Civil War. See Joseph Bragg Dunn, *The History of Nansemond County, Virginia* (n.p., 1907), pp. 31, 45, 52; *Vestry Book*, pp. xiii, xiv. The Virginia State Library, Rich-

the most direct records of his activities; we must turn to other counties, less direct sources, to obtain facts. The chief sources of information extant are Henning Tembte's will, court records of land and business transactions in counties other than Nansemond, the *Vestry Book*, and the journal of James Auld.[8] This last is the record of a journey made in 1765 by one James Auld, from Maryland, through Virginia, to North Carolina. Auld refers to the man who was his host in Nansemond County and his companion for the rest of the journey, simply as "my friend the Doctor," but internal evidence provides proof that "the Doctor" was Henning Tembte.[9] Thus we have a source of more intimate, informal information than can be found in official records and minutes. Further details about Tembte and his family are gleaned from family Bibles, marriage bonds, the *Virginia Gazette*, original letters, tombstones, census records.

None of these sources gives any inkling of the parentage or national origin of the man Henning Tembte. Since he was active in the Church of England, associated with and was related by marriage to families of English origin, he may have been English, but this is merely conjecture. The only references we have found to earlier persons whose names resemble the name Tembte are to a William Tempte of Kent County, Maryland, in 1686,[10] a John Tembed of Middlesex County, Virginia, in 1676,[11] and a John Feebty (spelling doubtful, according to Boddie) in Isle of Wight County, Virginia, in 1677.[12] There seems a possibility that these references might be to a William Tembte or a John Tembte, but investigation has failed to reveal any connecting link with Henning Tembte.

The earliest record we have found of the name Tembte in its correct spelling is in the will of Daniel Sherwood of Talbot County, Maryland,

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mond, does, however, possess some original documents which fill in some of the gaps, particularly for the post-Revolutionary period. Although there remain for Nansemond no accounts of lands bought and sold, there do remain complete records of all land grants, to be found in the Patent and Grant Books. Scattered information can be obtained from the large collection of legislative petitions, dating from 1778. There are also available Land Tax Lists, compiled by county and year, from 1782 on; the Nansemond files are nearly complete. Still another primary source for Nansemond is a set of county clerk's Fee Books for the years 1789 to 1818, complete except for the years 1791 and 1795. We have made grateful use of all of these documents in establishing the Nansemond activities of members of Tembte's family.

[8]James Auld, "The Journal of James Auld, 1765-1770," *Publications of the Southern History Association*, VIII (1904), 253-268.

[9]This statement will be substantiated later, after a discussion of Tembte's sons-in-law Malachi Murden and Edmond Daniel.

[10]Kent County Records, Hall of Records, Annapolis, Maryland, Testamentary Proceedings, Liber 13, folio 467.

[11]*Virginia Colonial Militia*, William Armstrong Crozier, ed. (New York, 1905), p. 98.

[12]John Bennett Boddie, *Seventeenth Century Isle of Wight County, Virginia* (Chicago, 1938), p. 163.

written 1733, probated 1738.[13] Sherwood, prominent in Maryland affairs, mentions in his will two sons and six daughters: Hugh, Daniel, Margaret, Mary (Auld), Elizabeth (Tembte), Catherine (Skinner), Dorothy (Elliott), and Lucy. It is not difficult to trace in Maryland court records the husbands and children of all of Sherwood's daughters, excepting only Elizabeth. Apparently the sole existing reference to her is in her father's will. Even the land left her by her father is subsequently mentioned only in a resurvey authorized in 1744 by the husband of her sister Lucy.[14] The records of St. Michael's Parish, Talbot County, give the births of Sherwood's daughters Margaret (1702) and Mary (1704), but the records of this parish are destroyed past 1704.[15] We may surmise that Elizabeth was born between 1706 and 1710, if Sherwood's will lists his daughters in order of age, as was customary.

The statement that Elizabeth Sherwood Tembte was the wife of Henning Tembte is rendered plausible by the rarity of the name Tembte, the tallying of dates, and the fact that Tembte's daughters were named Mary, Elizabeth, and Margaret, one grandson was named Daniel, all Sherwood names. But the strongest evidence is found in James Auld's journal, for James Auld was the son of Mary Sherwood Auld.[16] His journey was obviously planned around contact with Tembte: he stayed under Tembte's "hospitable Roof" near Suffolk for three weeks, traveled to Tembte's plantation in Halifax County, North Carolina, later moved to the town of Halifax, where he was "recommended by my friend" to Joseph Montford and other persons of prominence. Such contact strongly implies a close family relationship, such as Tembte being Auld's uncle by marriage.

Since we have found no further documentation about Elizabeth Sherwood Tembte, we can conjecture only broadly that she died after 1740, the probable date of birth of her youngest child, and before 1750, when there is a record of Tembte's selling land without a wife's co-signing the deed.

The earliest references to Henning Tembte himself are found in the *Vestry Book*. On November 3, 1744, "Docter Hening Tembte" is reimbursed for boarding an indigent person of the parish;[17] the following month

[13]Characteristically, in the contemporary recording (Talbot County Records, Hall of Records, Annapolis, Wills, Liber 22, folio 11) the name is misspelled, as Tembt, but in the original will, fortunately preserved (Talbot County, Original Wills, Box 21, Folder 30), the spelling is Tembte.

[14]Dorchester County Records, Hall of Records, Annapolis, Land Book 12, p. 242.

[15]M. Atherton Leach, "Register of St. Michael's Parish, Talbot County, Maryland, 1672-1704," *Pennsylvania Magazine of History and Biography*, XXIX (1905), 436.

[16]Emerson B. Roberts, "A Visitation of Western Talbot," *Maryland Historical Magazine*, XLI (1946), 244. The will of John Auld (Talbot County, Original Wills, Box I, Folder 41), dated 1765, probated 1766, speaks of son James being absent from the province.

[17]*Vestry Book*, p. 13.

he is elected a member of the vestry.[18] These are the first of nearly one hundred references to Tembte in the *Vestry Book*, spanning a period of twenty years, supplying us with bits of information which supplement facts found elsewhere, to reveal many aspects of the man.

The only direct facts relating to Tembte as a doctor are payments recorded in the *Vestry Book* for his professional services to the indigent.[19] But it is perhaps significant that although he never described himself as doctor, in his land or business transactions, he was almost always referred to by others by his title. The *Vestry Book* alternates calling him "Doctor" with calling him "Captain"; a Halifax land deed over thirty years after his death refers to him by title;[20] Auld identifies him only as "the Doctor." One minutia of documentation is the advertisement inserted in the *Virginia Gazette* of August 14, 1752, stating that among the letters to be called for at the post-office at Williamsburg is one to "Doctor Temty, Nansemond." This extensive use of his title in non-professional contexts seems to indicate not only professional activity, but also a certain affectionate esteem in which he was held.

As a planter, Tembte is easy to trace. His land holdings in Nansemond County were evidently extensive. A careful study of the processioning records from 1748 to 1768, as given in the *Vestry Book*, indicates that he owned land in five different precincts of the parish, much or most of it between the western and the southern branches of the Nansemond River. He must have acquired this land by purchase, since the only Nansemond County land grant he obtained was of late date, 1767, and consisted of only nineteen acres.[21] Unfortunately, the processioning records after 1768 are vague and incomplete, and it is impossible to conclude from them whether Tembte sold his land or handed it on to his family.

Tembte's Nansemond plantation can be located rather precisely from entries in Auld's journal. Auld writes, "having crossed the Bridge [in Suffolk] arived at my Friend the Doctrs. in about One hour 3 miles," and, later, "set out from the Docts. in the fork of Nansemond River in Compn. with him for South Kay Bridge on Black Water River." The description, three miles from Suffolk, in the fork of the Nansemond River, almost certainly identifies the property called Hills Point, later well known as the site

[18]*Vestry Book*, p. 15.

[19]*Vestry Book*, pp. 21, 152. There is no mention of Tembte in Wyndham Bolling Blanton, *Medicine in Virginia in the Eighteenth Century* (Richmond, 1931).

[20]Halifax County Records, Halifax C. H., North Carolina, Deed Book 19, p. 217.

[21]Patent Records, Virginia Land Office, Richmond, Patent Book 37, p. 8.

of Civil War skirmishing.[22] There is a tradition among the Webb descendants of Tembte that Richard Webb lived at Hills Point; it seems quite possible that it was Tembte, instead, whose property it was.

There are no records of Tembte's owning land in those Virginia counties which adjoin Nansemond: Southampton, Isle of Wight, or Norfolk, but as early as 1750 he was buying land in North Carolina. Land deeds show that between 1750 and 1760 Tembte acquired at least 5100 acres of land in Granville, Edgecombe, and Halifax counties, 1004 acres by land grant, the rest by purchase.[23] Over half of this land was in Halifax County; Tembte bought two lots in the town of Halifax; his plantation is located by Auld as being along Fishing Creek, fifteen miles south of the town of Halifax. These land dealings seem not to have been short-term transactions for profit; Tembte bought and held the land, presumably for cultivation. Two deeds relate the disposal of most of this property, a gift of 1587 acres to his daughter Margaret and her husband, shortly after their marriage,[24] and a sale of 3164 acres, not long before Tembte's death.[25] Since he settled so much land upon his daughter Margaret at the time of her marriage, it is probable that he made comparable marriage gifts to his older daughters, although no record has been found of such gifts.

In addition to his activities as doctor and as owner of sizeable land holdings in two colonies, Tembte also engaged in business, having as his partner one Thomas Fisher. Evidence of this partnership is found in more than seventy lawsuits filed in Southampton, Isle of Wight, and Edgecombe counties, with Henning Tembte and Thomas Fisher, plaintiffs, suing for the recovery of small debts.[26] The earliest of these suits was in 1757; some were still in court in 1772, after the deaths of both Tembte and Fisher; two suits of similar nature were brought by Mary Fisher in 1784 and 1785.[27] None of these suits mentions precisely what the debt is for, but in some the plaintiffs are characterized as merchants. Since Fisher owned and operated warehouses at South Quay, on Blackwater River, from 1764 on, it is not unreasonable to suppose that the business Tembte and Fisher were engaged in had to do with transporting and storing the products of the region: tobacco,

[22]Frank B. Butts, "Reminiscences of Gunboat Service on the Nansemond," *Soldiers' and Sailors' Historical Society of Rhode Island: Personal Narratives*, 3rd ser., VIII (1884), 5-67. See also Dunn, *History of Nansemond County*, p. 50.

[23]Halifax County, N. C., Deed Books 2-10.

[24]Halifax County, N. C., Deed Book 7, p. 114.

[25]Halifax County, N. C., Deed Book 10, p. 199.

[26]Southampton County Records, Courtland, Virginia, Order Books 2-8; Isle of Wight County Records, Isle of Wight C. H., Virginia, Order Books 1759-1780; Edgecombe County Records, North Carolina Historical Commission, Raleigh, County Court Minutes, 1765, p. 18.

[27]Southampton County, Order Book 6, p. 494; Order Book 8, p. 42.

tar, turpentine, pork, corn. Auld, in fact, tells of tar being stored at Fisher's warehouses, although he does not speak of Tembte being associated in this enterprise.

Although Tembte's land and business dealings were geographically extensive, there is no doubt that his chief interests and his chief activities were centered in Nansemond County. The vast majority of his land deeds identify him as a resident of Nansemond. Records are extant showing that he was justice of the peace for the county for at least the years 1750, 1752, and 1764;[28] he was sheriff of the county for the year 1757-1758.[29] The *Vestry Book* indicates that he was active as a vestryman for the twenty years during which he served; his absences from meetings of the vestry are scarcely enough to account for the journeys he must have made to North Carolina. These details all point to the conclusion that for most of his adult life Tembte considered Nansemond County his home.

About 1765 Tembte apparently decided to put his affairs in order. The *Vestry Book* records that on November 16, 1764, "Mr. Hening Tembtey Gent. one of the Members of this Vestry Came in to Vestry & Resignd Serveing Any Longer as A Vestry Man he being to Old to Serve."[30] He probably resigned as justice of the peace about the same time.[31] His journey to North Carolina in 1765 with James Auld may have been on the order of a permanent move; Auld mentions their being accompanied by Tembte's cartman and cart. In 1768 Tembte sold over three thousand acres of land in Halifax and Granville counties, and in this deed he describes himself as being "of Halifax County" rather than his habitual "of Nansemond County."[32] From this sale of substantially all of his Halifax property, it looks as if he moved his residence to his town house in Halifax. Here he died in 1771; it is likely that he is buried in the beautiful old graveyard in the town of Halifax, across the street from the colonial clerk of court's office.

Henning Tembte's will was dated October 9, 1771; it was probated in the Halifax County Court that same November.[33] The will is brief and

[28]*Executive Journals of the Council of Colonial Virginia*, Wilmer L. Hall, ed., V (1945), 333, 393; "Justices of the Peace of Colonial Virginia, 1757-1775," Henry R. McIlwaine, ed., *Bulletin of the Virginia State Library*, XIV, nos. 2, 3 (April, July, 1921), 59.

[29]*Vestry Book*, pp. 120, 122, 123, 126; also Vestry Book of Suffolk Parish, Nansemond County (photocopy in Virginia State Library), pp. 18, 19.

[30]*Vestry Book*, p. 168.

[31]There are lists extant of the justices of the peace for Nansemond for 1764 and 1765 (McIlwaine, "Justices of the Peace of Colonial Virginia," *Bulletin*, XIV, 59, 60). The former list includes Tembte, the latter includes Thomas Fisher. It looks as if Tembte resigned during the year, being replaced by his son-in-law Fisher.

[32]Halifax County, N. C., Deed Book 10, p. 199.

[33]Halifax County Records, North Carolina Historical Commission, Raleigh, Will Book, 1755-1781, Part II, p. 13.

conventional. His legatees are his granddaughter Peggy Riddick, his daughters Mary Fisher and Elizabeth Murden, and his housekeeper Elizabeth Davis. He names as his sole executor David Sumner. Probably because of the Revolutionary War, and the death of David Sumner in 1778,[34] Tembte's estate was not settled by 1787, when both Edmond Daniel, second husband of Elizabeth Murden, and Elizabeth Davis granted power of attorney to John Branch to settle their claims to Tembte's estate.[35] We have found no record of the final settlement.

Turning to Henning Tembte's daughters, we find that there is a substantial amount of information available about them and about their families. We may deduce that Mary was the oldest, born about 1732; Elizabeth was born in 1734; Margaret was born between 1736 and 1742. These deductions are based upon evidence that Elizabeth was born in 1734, upon the fact that Mary was named before Elizabeth in their father's will, and upon documentation that Margaret married, in 1760, a man who was born in 1736.

Mary Tembte married, about 1750, Richard Webb of Nansemond County, probably the son of the Richard Webb of Nansemond mentioned in the 1704 quit rent lists,[36] who received a land grant in 1711.[37] Almost the only source of information about the younger Webb is the *Vestry Book*. He is first mentioned in 1744, when he is paid for boarding an indigent.[38] In *Vestry Book* processioning records, his land is described as adjoining Tembte's; in 1760 he received a land grant of 290 acres, adjoining Tembte's land.[39] He served as clerk of the vestry for two and a half years, was appointed vestryman and churchwarden of the parish. He died between April 8, 1760, on which date he attended a meeting of the vestry, and November 28, 1760, when "Mary Webb Administratrix of Richard Webb Late Church Warden rendered in his Account for Sundries Deliverd the Poor in his Life time and the Ball. is due To the Parrish."[40] Although the *Vestry Book* shows no connection between Tembte and Webb, proof of the marriage of Mary Tembte and Richard Webb is provided in a land deed.

[34]The will of David Sumner (Halifax County, N. C., Will Book, 1755-1781, Part II, p. 58) is dated September 30, 1774. Through a clerk's error, no date of probate appears, but the wills which are recorded immediately preceding and immediately following Sumner's will were probated November 1778 and February 1779, respectively.

[35]Halifax County, N. C., Deed Book 17, pp. 176, 177.

[36]As given in Thomas Jefferson Wertenbaker, *The Planters of Colonial Virginia* (Princeton, 1922), p. 200.

[37]Virginia Patent Book 10, p. 53.

[38]*Vestry Book*, p. 13.

[39]Virginia Patent Book 33, p. 827

[40]*Vestry Book*, p. 153.

In 1760 Tembte gave land in Halifax County to his daughter Margaret, her husband, and their heirs. The deed states, "and in default of such heir then to Henning Webb, son of Richard Webb, and heirs of his body lawfully begotten and in default of such heir to descend to the right heir of the said Henning Tembte."[41] This phrasing not only establishes the marriage, but supports the assertion that Mary was Tembte's oldest daughter, Henning Webb her oldest son.

Prior to January 1763 Mary Tembte Webb married Thomas Fisher, her father's business partner. The date can be established by the fact that on January 13, 1763, Thomas Fisher and Mary his wife sold land in Southampton County, Virginia.[42] Verification of the fact that Fisher's wife was Tembte's daughter is found in Auld's journal, where he speaks of spending a night "at Mr. Thos. Fisher's who intermarrd the Wido. Webb formerly Mary Temble."

While there are copious references to Fisher as Tembte's business associate, there are few other references to him. We have not found his parentage or origin; the earliest document relating to him is a land deed of 1757, in which he is spoken of as being of Isle of Wight County, Virginia.[43] He is scarcely mentioned in the *Vestry Book;* the only civic activities of which we have found record are his serving on a committee to consider the building of a bridge over Nottoway River, in 1762,[44] and his serving as justice of the peace for Nansemond in 1765 and 1768.[45] He bought less than 800 acres in Southampton and Isle of Wight counties,[46] no land that we know of in North Carolina.

Thomas Fisher received one land grant, of 132 acres, in 1764.[47] This piece of property figures largely in the records until Fisher's son disposed of it in 1795. When patented, it lay in Nansemond County; as such, its processioning is recorded in the *Vestry Book.* In 1786, when county lines were shifted,[48] it became part of Southampton County. An advertisement in the *Virginia Gazette* describes this property. Since this is the only description we have found of any of the homes of Tembte or of his daughters, we are quoting in detail:

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[41]Halifax County, N. C., Deed Book 7, p. 114.
[42]Southampton County, Deed Book 3, p. 201.
[43]Southampton County, Deed Book 2, p. 167.
[44]William Waller Hening, *The Statutes at Large; Being a Collection of all the Laws of Virginia* (Richmond, New York, Philadelphia, 1809-1823), VII, 623.
[45]McIlwaine, "Justices of the Peace of Colonial Virginia," *Bulletin,* XIV, 60, 89.
[46]Southampton County, Deed Books 2, 3; Isle of Wight County, Deed Book 8.
[47]Virginia Patent Book 36, p. 615.
[48]Hening, *Statutes,* XII, 69.

A Plantation in Nansemond county, at *South Key* bridge, on *Blackwater*, containing about 130 acres, on which is a dwelling-house 32 by 24, with four rooms on a floor and a brick cellar, suitable outhouses, a young thriving orchard, and every thing in good repair; also a storehouse and two new warehouses 30 by 20 each, with ten feet sheds on every side, being the land and plantation whereon *Thomas Fisher* now lives. The situation is well known to be convenient for trade, being on a publick road, and contiguous to a very considerable scope of well settled country. There are nine feet water up to the warehouses, and as the landing is within 20 miles land carriage, and the most convenient to navigation on *Nansemond* river, considerable advantage will be yearly made by storing pork, tobacco, &c. intended from *Roanoke* and the other rivers in *North Carolina* for *Virginia*.[49]

Corroboration of this description is found in Auld's discussion of the products of the region, and his brief mention of tar being carted from North Carolina, stored at Fisher's warehouses, then carted to Suffolk. Later, during the Revolutionary War, while Mary Fisher still owned the property, the little community of South Quay was actively concerned in war supply. During those periods when the British blockaded Chesapeake Bay, the only direct foreign trade of Virginia was by way of Albemarle Sound, and South Quay was the terminal for this trade.[50] There are numerous references to this trade and to skirmishing in this region;[51] in 1781 the British burned the warehouses at South Quay.[52]

Thomas Fisher died before June 1772.[53] From this time to her death, Mary Fisher lived on at South Quay; an original letter by her, dated 1781, is headed "South Quay." The Nansemond census of 1783 lists her household as consisting of two white persons and two slaves;[54] the census of 1784 lists her family as consisting of three white persons and her property as containing one dwelling, eight other buildings. Although she did not leave a will, the inventory of her estate, taken in June 1795, establishes the approximate date of her death.[55] She is undoubtedly buried at South Quay, in the family burial plot which is mentioned in the final sale of the South Quay

[49]*Virginia Gazette* (Purdie & Dixon), February 9, 1769.

[50]Dunn, *History of Nansemond County*, p. 43.

[51]See, for example, references to South Quay in *Calendar of Virginia State Papers and Other Manuscripts*, William P. Palmer et al., eds. (Richmond, 1875-1893), I-IX.

[52]A legislative petition of Southampton and Nansemond counties, dated November 11, 1782, speaks of the warehouses at South Quay having been burned by the British in July 1781.

[53]An advertisement in the *Virginia Gazette* (Purdie & Dixon) of June 11, 1772, refers to the "plantation and houses of *South Quay*, lately occupied by *Thomas Fisher*, deceased." On the same day a suit was filed in Southampton County by James Dunlop as administrator of Thomas Fisher, deceased (Southampton County, Order Book 6, p. 1).

[54]*Heads of Families at the First Census of the United States: Virginia* (Washington, 1908). The Nansemond census of 1783 is found on pages 56-58; the Nansemond census of 1784, on pages 72-74.

[55]Southampton County, Will Book 4, p. 717.

property: "excepting the family burial ground containing 400 square feet."[56]

Mary Tembte Webb Fisher had four children: Henning Webb, Daniel Webb, Tembte Fisher, and Robert H. Fisher. The oldest, Henning Webb, is difficult to trace. We have found only three references to him, all of them minutiae. One is the land deed of Henning Tembte which was quoted above. Another is a deed of Tembte of 1768, which was witnessed by Henning Webb.[57] The third reference appears in the *Vestry Book*, where in 1775 Henning Webb is appointed to procession land.[58] In order to be named a processioner, a man must have been a freeholder of that precinct.[59] Thus we can establish that in 1775 Henning Webb was of age, not living with his mother at South Quay, but owning property in that precinct in which both Richard Webb and Tembte had formerly owned land. Since no further mention of Henning Webb has been found in family records, land or tax records, or census records, he may have died young.

There are more records extant concerning Daniel Webb. In an interesting secondary source an account is given of his serving as first prize master on a privateer schooner during the Revolutionary War, in 1781.[60] He is listed in the 1783 census of Nansemond as having no family but himself, owning three slaves. Subsequently he signed various legislative petitions concerning Nansemond County business. In 1793 he married Mary Darden Gardner of Southampton County.[61] In the Nansemond County Land Tax Lists he is referred to as owning property in 1802, and being dead by 1803. Nansemond County Fee Books refer to the settling of Daniel Webb's estate from 1803 to 1818.

A single, fascinating document points up Mary's daughter, Tembte Fisher. The marriage bond of Tembte Fisher to Redmond Hackett, dated March 14, 1781, is recorded in Southampton County. To the original bond, preserved in the Virginia State Library, is affixed a letter of consent from Mary Fisher, dated the previous day, which explains why the bond was issued in Southampton County instead of in Nansemond County. The letter reads, in part: "It is Currently Reported here that Coll: Parker has had an Engagement & was Oblidged to Retreat with some loss. the Consequance that May Ensue we can Not foresee; however I thought it prudent

[56]Southampton County, Deed Book 8, p. 236.
[57]Halifax County, N. C., Deed Book 10, p. 199.
[58]*Vestry Book*, p. 231.
[59]*Vestry Book*, pp. xxi, xxii.
[60]William Cicero Allen, *History of Halifax County [North Carolina]* (Boston, 1918), pp. 138-139.
[61]Southampton County, Marriage Bonds, bond dated January 10, 1793.

to Remove my Daughter from this public place to a friends house one Mr. Hardy Cobbs in So. Hampton where I expect she will live untill she is Maried or the Enemy's Departure." In view of the fact that the South Quay warehouses were destroyed by the British four months later, Mary Fisher's fears seem to have been justified. Her letter gives an intimate glimpse of a detail of life during the Revolution, and also an insight into the kind of person Mary Fisher must have been, to stay with her home and business in the face of danger, but to send her daughter to friends for safety. From the evidence of the marriage bond, Tembte Fisher must have been born in 1763 or 1764. It is probable that she died within a year or so after her marriage, for the 1783 census lists Redmond Hackett, living near Mary Fisher, as having no family but himself.

Robert H. Fisher was born in 1766, died May 26, 1815, according to his tombstone in the Cedar Hill Cemetery, Suffolk.[62] Family papers[63] supplement the few remaining Nansemond and Southampton records to establish him as doctor, intellectual, visionary, man of wealth. He studied medicine in Philadelphia in 1793, traveled to Jamaica on a business project in 1801. He was named administrator of the estates of his mother and of his brother Daniel Webb. After his mother's death he disposed of the South Quay property and moved to Suffolk, where he set up practice. In 1804 he was one of a delegation named to wait upon the North Carolina legislature relative to the opening of a canal system leading from the Nansemond River to the Roanoke River.[64] He married, about 1805, Mrs. Charlotte (Holland) Lassiter. A family copy of his will is preserved, although the official record is, of course, destroyed. In his will he names, besides his wife, only the four children of his brother Daniel Webb, thus leading us to infer that Henning Webb and Tembte Fisher Hackett had left no heirs.

Elizabeth Tembte was the longest lived of Henning Tembte's daughters. George White in his *Historical Collections of Georgia* speaks of Mrs. Elisabeth Daniel of Greene County, Georgia, who died on October 4, 1819, at the age of eighty-five.[65] Since Elizabeth Tembte, as the widow Daniel, was living in Greene County as late as 1803, and since we have found no reference to any other contemporary Mrs. Elizabeth Daniel of Greene County, this record almost certainly establishes birth and death dates for Tembte's middle daughter.

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[62]He was originally buried in the family burial ground at South Quay; his body was later removed to the Suffolk cemetery.

[63]Now belonging to Mrs. Robert H. Webb, Charlottesville, Virginia, deposited with the Alderman Library, University of Virginia, as part of the Webb-Prentis Papers.

[64]Samuel Shepherd, *The Statutes at Large . . .* (Richmond, 1834-1836), III, 110, 135, 185.

[65]George White, *Historical Collections of Georgia* (New York, 1855), p. 478.

Elizabeth Tembte married, before 1759, Malachi Murden of Norfolk County, Virginia, son of Edward Murden. In the Norfolk County court records are found some few references to Malachi Murden. He was spoken of as a minor in the will of his father, in 1735;[66] he was later a legatee of his stepfather, being bequeathed, among other possessions, pistols and holsters and sword.[67] He was sometime inspector of tobacco for Norfolk County;[68] he was appointed guardian of his two nieces after the death of his brother.[69] In 1759 and 1763 Malachi Murden and Elizabeth his wife sold that land in Norfolk County which he had inherited from his father.[70] They then moved to Halifax County, North Carolina, where Murden, describing himself as merchant, purchased nearly 1200 acres of land in 1764 and 1765.[71] This land was on the north side of Fishing Creek, adjoining Tembte's. It is possible that, until Tembte moved permanently to North Carolina, Murden was in charge of Tembte's property, for Auld speaks of "the Estate of the Doctr. whereon his Son in Law [Malachi] Murden lived." A court order of Edgecombe County establishes that Murden was dead by April 1771.[72] No record of will or inventory has been found.

Elizabeth Tembte Murden married Edmond Daniel, probably the early part of 1773. On May 5, 1773, Edmond Daniel and Elizabeth his wife sold those property rights held "by virtue of the said Elizabeth's right of Dower as relict and widow of Malachi Murden Esquire deceased."[73] The background of Edmond Daniel has not been traced, although several of his land transactions were witnessed by other persons named Daniel. The first record of him in Halifax County is in 1773.[74] By purchase and land grant he acquired nearly 1000 acres of land in Halifax County, which he sold in 1783 and 1785.[75]

In 1785 Daniel and his wife and family moved to Georgia, settling in

[66]Norfolk County Records, Portsmouth, Virginia, Deed Book 12, p. 83.
[67]Will of Thomas Butt, 1745, Norfolk County, Will Book H, p. 150.
[68]Norfolk County, Order Book, 1759-1763, p. 132.
[69]*Ibid.*, p. 186.
[70]Norfolk County, Deed Book 18, p. 240; Deed Book 20, p. 276.
[71]Halifax County, N. C., Deed Book 9, pp. 98, 99, 178, 339, 400.
[72]A legal document bearing this date and referring to Robert Bignall, administrator of Malachi Murden, is found in a box marked "Halifax County Miscellaneous Material," in the North Carolina Historical Commission, Raleigh.
[73]Halifax County, N. C., Deed Book 13, p. 189. We are now able to establish conclusively that Auld's "friend the Doctor" was Henning Tembte. Proof comes from combining three statements already referred to in the text. First, Auld says that Malachi Murden was the son-in-law of "the Doctor." Second, Edmond Daniel says that he married Elizabeth, the widow of Malachi Murden. Third, in giving power of attorney for settling Tembte's estate, Edmond Daniel says that his wife, Elizabeth Murden Daniel, was the daughter of Henning Tembte.
[74]Halifax County, N. C., Deed Book 13, p. 147.
[75]Halifax County, N. C., Deed Books 13-15.

that section which was then in Wilkes County, later in Greene County. The first of Daniel's numerous land deeds is recorded in Wilkes County in June 1785.[76] In the 1785 tax list of Wilkes County his tax liabilities are given as four and one-half polls, seven slaves, nearly 900 acres of land in Wilkes and Washington counties.[77] Daniel seems to have been primarily a dealer in land, for records show the buying and selling of about 2400 acres, in various counties, from the time he reached Georgia until his death.[78] He was evidently well thought of in his community, for he was named executor of various wills, witness to transactions, appraiser of estates.[79]

Edmond Daniel died between February 20, 1803, the date of his last purchase of land,[80] and June 24, 1803, when John Bailey and Malachi Murden (Daniel's stepson) applied for letters of administration on the estate of Edmond Daniel, deceased.[81] Elizabeth Daniel survived her husband; a quit claim, executed in September 1803, reserves to Daniel's widow Elizabeth a lifetime right in the home plantation in Greene County, the property to go after her death to the heirs of Edmond Daniel.[82] Elizabeth Daniel doubtless continued to live on this property until her death in 1819. She is buried probably in a Daniel family graveyard near Daniel Springs, Greene County, Georgia.

It appears that Elizabeth Tembte Murden Daniel had eight children. We know that Malachi Murden was survived by five children, Edmond Daniel by three. There is not the faintest hint that either Murden or Daniel was married previously; the estimated ages of the children tally with the dates of Elizabeth's marriages. So the presumption is strong that she was the mother of them all.

The five children of Malachi Murden are identified by means of land deeds in Halifax County, North Carolina. We can establish that there were exactly five surviving children by the fact that each sold a one-fifth right in a particular tract which had been Murden's. All of them moved to Georgia with Elizabeth and Edmond Daniel.

Abbalony Murden married Daniel Morris of Halifax County before 1785. They sold their land in Halifax County in 1785 and 1787, in the

[76]Wilkes County Records, Washington, Georgia, Land Book HH, p. 110.
[77]*Early Records of Georgia: Wilkes County*, Grace Gillam Davidson, comp. (Macon, Ga., 1932), II, 28.
[78]Deed Books of Wilkes, Taliaferro, and Greene counties, at Washington, Crawfordville, and Greensboro, Georgia, respectively
[79]Davidson, *Records of Georgia*, I, 65, 69; II, 85, 246, 279.
[80]Greene County, Ga., Deed Book 4, p. 185.
[81]Greene County, Ga., Inventory Book E, p. 200.
[82]Greene County, Ga., Deed Book 3, p. 667.

latter deed describing themselves as being of Wilkes County, Georgia.[83] Daniel Morris is named in the Wilkes County tax list of 1785;[84] he was an appraiser of an estate in Wilkes County in 1795;[85] he is listed as having one draw in the land lottery of Oglethorpe County, Georgia, in 1804.[86] We have found no further reference to them.

Elizabeth Murden married Spencer Thomas of Edgecombe County, North Carolina, prior to 1787, at which time they sold their land in Halifax County.[87] There is a Spencer Thomas given in the Wilkes County tax list of 1793;[88] one who was a member of a petit jury of Oglethorpe County in 1794;[89] one to whom there are several references in Upson County, Georgia, from 1824 to 1827.[90] There is no reason not to suppose that these references are all to the same man.

Lucy and Nancy Murden were unmarried in 1790 and 1792, respectively, when, as residents of Wilkes County, they disposed of their last property in Halifax County.[91] We have found no further reference to them, in Georgia or elsewhere.

Malachi Murden, son of Elizabeth and Malachi Murden, seems to have spent his life in close contact with his mother and stepfather. He settled in Taliaferro County, just a few miles from the Daniel plantation; his name appears frequently in records of Daniel transactions; he was one of the administrators of his stepfather's estate. He married, in 1806, Winefred Asbury of Greene County.[92] There are numerous records of his business transactions in Greene and Taliaferro and Wilkes counties; he seems to have become a wealthy man. He died, intestate, on August 28, 1844, and is buried in a Murden family graveyard in Taliaferro County, near the Greene County line.[93]

The heirs of Edmond Daniel are listed in the quit claim of 1803, referred to above, as Cordil Daniel, Henning Daniel, and Tembte Bailey.

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[83]Halifax County, N. C., Deed Book 15, p. 324; Deed Book 17, p. 141.

[84]Davidson, *Records of Georgia*, II, 28.

[85]*Ibid.*, I, 103.

[86]*Land Lottery List of Oglethorpe County, Georgia, 1804, and Hancock County, Georgia, 1806*, Martha Lou Houston, ed. (Columbus, Ga., 1928), p. 8.

[87]Halifax County, N. C., Deed Book 17, p. 141.

[88]*Some Early Tax Digests of Georgia*, Ruth Blair, ed. (Atlanta, 1926), p. 290.

[89]*Historical Collections of the Joseph Habersham Chapter, D. A. R.*, Mrs. William Lawson Peel, ed. (Atlanta, 1910), III, 107.

[90]Carolyn Walker Nottingham and Evelyn Hannah, *Early History of Upson County, Georgia* (Macon, Ga., 1930), pp. 57, 149, 184, 293, 307.

[91]Halifax County, N. C., Deed Book 17, pp. 238, 380.

[92]Greene County, Ga., Marriage Bonds, bond dated January 16, 1806; will of Richard Asbury, 1845, Greene County, Ga., Will Book G, p. 30.

[93]The date of death is taken from the tombstone; accounts of settling the estate are given in Taliaferro County, Ga., Account Books, 1844-1845.

Cordil Daniel,[94] named first, may have been the oldest. The only references we have found to him, other than the quit claim, are to the settlement of his estate when he died, in Greene County, before June 1805.[95] His administrators were John Bailey and Henning Daniel.

Henning Daniel lived and died in Greene County. Only a few facts of his life have been learned: he bought and sold a small amount of land; he was one of the administrators of the estate of his brother Cordil Daniel; his wife was Hannah Asbury, sister of Malachi Murden's wife;[96] he died before September 1817. But although there are few records of Henning Daniel's life, there are copious, detailed court records concerning the settling of his estate, from 1817 to 1837.[97]

The only reference we have found to Tembte Daniel Bailey is the mention of her as her father's heir.[98] Since John Bailey was administrator of the estates of both Edmond Daniel and Cordil Daniel, he may well have been Tembte Daniel's husband, but no proof has been found of this assumption.

Margaret Tembte, the youngest daughter of Henning Tembte, died young and left but one child. For a reconstruction of her life we must depend almost entirely on the records in the family Bible of Lemuel Riddick, her father-in-law. Since the account is poignant, we quote in detail: "Edward Riddick was born Jan'r 29th, 1735/6. . . . Edward maried Margaret, the Daughter of Capt. Henning Temble, Jan. last she was delivered of a female Child on the third Day of this Instant, Nov'r 1760 & she, the Mother Departed this Life Saterday Morning Last, the 15th inst. and is this day [November 17, 1760] buried at her fathers plantation. . . . My Son Edward's Daughter was baptised and named Margarett."[99]

The only other document we have found concerning Margaret Tembte Riddick is the land deed of Henning Tembte, recorded in Halifax County, dated September 1760, to which we have referred above. This is a deed of gift to Edward Riddick and Margaret his wife, 1587 acres of land and eight

[94]Here is another name of difficult spelling. There are only three court records of this man in Greene County, and his name is spelled differently in the three: Cordil, Cordy, and Cordial.

[95]Greene County, Ga., Record Book E, p. 174.

[96]Will of Richard Asbury, 1845, Greene County, Ga., Will Book G, p. 30.

[97]Greene County, Ga., Return Book H; Record Book L.

[98]In the quit claim the third heir is given as Temple Baily; there can be no doubt that the name is Tembte.

[99]We have been unable to consult the original Bible, but have compared three copies of the records: one quoted in James Dinkins, *The Dinkins and Springs Families* (New Orleans, 1908), p. 21; a copy made by Phyllis Walker Francis, deposited in the Virginia State Library; and a copy made by Eva B. Osborne (Mrs. Robert N.) and Mary Causey Kendrick (Mrs. M. K.), now owned by Mrs. Kendrick, Suffolk, Virginia. While the three copies have minor variations, as in spelling and punctuation, they are in complete agreement on the facts to which we refer here. We are making direct quotation from Mrs. Kendrick's copy.

slaves, deeded in the formal phrases, "for and in consideration of the love good will and paternal affection which he hath and bears unto the said Margaret as also for and in consideration of the sum of five shillings."

Rather more is known about Margaret's husband, Edward Riddick. He was the son of Lemuel Riddick, one of the most prominent persons in Nansemond County history, member of the Virginia House of Burgesses for thirty-nine years. Edward Riddick, also, assumed his share of responsibility and leadership in the affairs of the county. As a churchman, his activities are recorded in the *Vestry Book*. He was first elected member of the vestry on November 28, 1760, to replace Richard Webb, deceased;[100] it will be noted that this was not quite two weeks after his wife's death. He served as vestryman and churchwarden until January 14, 1767, when he "resignd Serveing as A Vestryman Any Longer on Account of his Liveing So Inconvenient."[101] In the *Vestry Book* he is sometimes referred to as "Captain"; later, during the Revolutionary War, he took active status as colonel, was for awhile in charge of the militia defending Suffolk.[102] He was executor of his father's estate;[103] he did not remarry after the death of his wife.[104] In the Nansemond Land Tax Lists he is recorded as owning 1800 acres and four town lots in 1782 and 1783; in the Nansemond census of 1783 his household is said to consist of eight white persons, forty slaves. He died in September 1783.[105]

To Margaret Riddick, daughter of Margaret and Edward Riddick, we have found but three references: in a Bible record, in a will, in a land deed. As it is for her mother, the chief source of information is the Lemuel Riddick Bible. Here are recorded her birth, on November 3, 1760, and her marriage to Samuel Barron Cunningham, on September 27, 1778. Cunningham was a Revolutionary captain,[106] importer and merchant,[107] member of a prominent family of Elizabeth City County, Virginia.[108] This Bible also records the births of their six children, the youngest being named

[100]*Vestry Book*, p. 153.

[101]*Vestry Book*, p. 180.

[102]Dunn, *History of Nansemond County*, p. 44; Henry Howe, *Historical Collections of Virginia* (Charleston, S. C., 1845), p. 387.

[103]*Virginia Gazette* (Purdie), May 2, 1777.

[104]This statement is supported by verbal tradition and also by negative evidence. Records in the Lemuel Riddick Bible, which are detailed and appear complete, give only the one marriage for Edward Riddick.

[105]Lemuel Riddick Bible.

[106]Robert Armistead Stewart, *The History of Virginia's Navy of the Revolution* (Richmond, 1933), p. 176.

[107]*Virginia Gazette* (Purdie), December 5, 1777; Palmer, *Calendar of Virginia State Papers*, VII, 100-102.

[108]Stewart, *Virginia's Navy of the Revolution*, p. 145.

Henning Tembte Cunningham, and the death of Margaret Riddick Cunningham, on August 5, 1793.

Not much substance is added to this bare outline by the other documents we have found. Tembte's will leaves to his granddaughter Peggy Riddick bequests of apparently sentimental value. And in 1786 Samuel Barron Cunningham and Margaret his wife sell a portion of that land in Halifax County which was earlier given by Tembte to his daughter Margaret.[109]

We have here presented essentially all the facts known about Henning Tembte and his immediate family. If these facts are pieced together, what picture do they give of Henning Tembte himself? What kind of man was he? What were his contributions to his times, to future times?

Little or nothing can be drawn from direct evidence about Tembte's physical appearance or personality. We have found no portrait, no signature, no document composed by him, except his will. Even Auld's journal gives no description of the man, no personal idiosyncrasies. Auld's phrases are warm but conventional and indefinite, and must be viewed in the light of the relationship of host and guest.

But although direct evidence is lacking, we may infer much of Tembte's individuality from the documented facts of his life. He was comfortably, but not exceedingly, wealthy, as is indicated by his land holdings, his business, his gifts to his children. In his will he left to his granddaughter Peggy "one Dozen silver table spoons two saults and one Punch Ladle." His daughter Mary, after some twenty years of widowhood, after having been in the very midst of the Revolutionary War, still left in her estate mahogany and walnut furniture, India china, Delft bowls, much pewter, copper, brass. Although we have no record of Tembte's buying or selling slaves, he gave eight slaves to his daughter Margaret, one to his granddaughter Peggy.

That Tembte was a man of intelligence and education, as well as a man of wealth and culture, may be inferred not only from his being a doctor, but also from the superior intellectual standing of his family. In a day when women received little education, were afforded little responsibility, Tembte's mother-in-law, Mary Sherwood, was named executrix of her husband's will, and signed documents with a beautiful script. Tembte's daughter Mary was administratrix of her first husband's estate, and during a long widowhood conducted the business of the warehouses at South Quay. She brought up her children to become persons of responsibility and prominence, and her letter of 1781 indicates intelligence and education as well as strength of character. Tembte's sons-in-law were merchants and planters, civic-

[109]Halifax County, N. C., Deed Book 17, p. 25.

minded, with evidences of above average education. Tembte's grandson Robert H. Fisher was a doctor and an intellectual of outstanding ability.

The positions of responsibility to which Tembte was named in his community, vestryman, justice of the peace, sheriff, attest to the respect and esteem in which he was held by his contemporaries. His association and friendship with persons like Lemuel Riddick, Joseph Montford, David Sumner, indicate that he was a person of comparable local stature and achievement.

Possibly the best indication of Tembte's personal qualities is the fact that his daughters appear to have loved and revered him. His two older daughters each named a son Henning and a daughter Tembte; his youngest daughter's only child gave a son the complete name Henning Tembte. In the last two hundred years there have been twenty or more descendants who have been named Henning or Tembte or both. Such persistence of naming would seem to indicate family love and family pride, possibly some faint recollection or tradition of the man who last bore the two names.

What were Henning Tembte's contributions to his generation, to subsequent generations? He led a life of professional and civic responsibility and leadership. To the future he left the benefits of his own accomplishments, he left a family trained in responsibility, and he left the rare flavor of that unique name, Tembte.

HENNING TEMBTE'S FAMILY

Henning Tembte
(c. 1700-1771)
m. c. 1730 =
Elizabeth Sherwood
(c. 1708-*ante* 1750)

- Mary Tembte (c. 1732-1795) m. (1) c. 1750 Richard Webb (*d.* 1760) =
  - Henning Webb
  - Daniel Webb m. 1793 Mary Darden Gardner (*d.* c. 1803)
- m. (2) c. 1763 Thomas Fisher (*d.* c. 1772) =
  - Tembte Fisher m. 1781 Redmond Hackett
  - Robert H. Fisher m. c. 1805 Mrs. Charlotte Holland Lassiter (1766-1815)
- Elizabeth Tembte (1734-1819) m. (1) *ante* 1759 Malachi Murden (*d.* c. 1771) =
  - Abbalony Murden m. *ante* 1785 Daniel Morris
  - Elizabeth Murden m. *ante* 1787 Spencer Thomas
  - Lucy Murden
  - Nancy Murden
  - Malachi Murden m. 1806 Winefred Asbury (*d.* 1844)
- m. (2) c. 1773 Edmond Daniel (*d.* 1803) =
  - Cordil Daniel (*d.* c. 1805)
  - Henning Daniel m. c. 1800 Hannah Asbury (*d.* c. 1817)
  - Tembte Daniel m. *ante* 1803 John (?) Bailey
- Margaret Tembte (c. 1740-1760) m. 1760 Edward Riddick (1736-1783) =
  - Margaret Riddick m. 1778 Samuel Barron Cunningham (1760-1793)

NOTES *and* QUERIES

NOTES

JOHN LEWIS OF PORTHOLY IN MONMOUTHSHIRE AND GLOUCESTER (1594-1657) – Settlers of colonial Virginia often made herculean efforts to see that their place of origin in the Old World was not obscured. Readers of Dr. Malcolm H. Harris' incisive article, "John Lewis (1594-1657)," in the *Virginia Magazine of History and Biography* for April 1948 will recall Dr. Harris' words (p. 200): "It would be interesting to have research made in the records of Monmouthshire, England, to see if some facts may be obtained that would positively establish the connection of this ancient Virginia family across the water."

The tombstone discovered near Poropotank Creek by Messrs. Bland and Harris shows that John Lewis was "Borne in Munmoth Shire" and was apparently entitled to two or four coats of arms (quartered, not impaled), the third of which bore three chevronels, well known as the arms of Jestyn ap Gwrgant, Founder of the (Fourth or) Fifth Royal Tribe of Wales, a descendent of Caractacus.

Mrs. Nell Marion Nugent in *Cavaliers and Pioneers* (p. 336) shows that Major William Lewis (whom Dr. Harris believes to have been son or brother of the original John Lewis) in January 1656 owned a 2,600 acre tract "commonly called Portholy *alias* Chymahocans." In 1717 "Chemokins *alias* Port Holy" in St. Peter's Parish, New Kent County, was owned by John Lewis (1669-1725) of Warner Hall.

The Englishman's quite natural tendency to separate Portholy into two words has served, in all likelihood, to obscure for three centuries a truth clearly perceptible to anyone familiar with the Welsh language, and in the 1600's upper Monmouth was more Welsh than English. John Speed's map of Monmouth in 1610 shows near the headwaters of the river Usk a Welsh village of Llandilobarthole. Samuel Lewis, *A Topographical Dictionary of England* (4 vols., London, 1831) shows (III, 113): "Llantillio-Pertholey, a parish in the lower division of the hundred of Abergavenny, county of Monmouth, 1¾ mile (N.N.E.) from Abergavenny . . . containing 726 inhabitants. . . . The living is a discharged vicarage, in the archdeaconry and diocese of Llandaff. . . . The church is dedicated to St. Teilaw."

When one consults Octavius Morgan, *Some Account of the Ancient Monuments in the Priory Church, Abergavenny* (Newport, 1872), for the discussion of the recumbent monument of Dr. David Lewis, Judge of the High Court of Admiralty (p. 83), one finds:

"Dr. David Lewis was the eldest son of the Rev. Lewis Wallis, (or Lewis ap John ap Gwilym ap Robert Wallis), vicar of Abergavenny and Llantilio Pertholey, in the time of Henry VIII, by Lucy, daughter of Llewelyn Thomas Lloyd, of Bedwelty, and seems to have taken his father's name Lewis as his permanent surname. He was descended from a junior branch of the family of Wallis of Treowen and Llanarth, the original name being Le Galleys, Le Walleys, Walensis, or Wallis, as written at different periods, the original ancestor being Richard Le Galleys, living in the time

of King John. The first of the direct ancestors of Dr. Lewis of whom we have any certain account is a Robert Wallis in the time of Henry VI, but of whom he was the son does not clearly appear. He is called Robyn in the records of Abergavenny, and married Joan, daughter of John Combray, alias Chinn, and had issue Gwilym ap Robert ap Wallis, who married a daughter of Sir William ap Thomas, and had issue John Wallis, who married Margaret, daughter of David Arwydd, and they had issue the Rev. Lewis Wallis, father to Dr. David Lewis; from which time Lewis seems to have been the continued surname of the family. He was born at Abergavenny, and was elected Fellow of All Souls College, Oxford, in the year 1541. He afterwards became Principal of New Inn, and was admitted to the degree of D.C.L. In 1558 he was appointed Judge of the High Court of Admiralty, which post he held to the time of his death. He was named by Queen Elizabeth in the foundation charter of Jesus College, Oxford, the first and original Principal, which post he soon resigned, being at that time a Master in Chancery, and also of the Queen's Court of Requests, as well as Master of St. Catharine's Hospital at the Tower of London." His will, dated March 27, 1584, left legacies to various relatives, among them Maud, his sister, wife of William Baker, Recorder of Abergavenny. Dr. David Lewis (1520-1584) died unmarried and on his monument appear only two coats of arms: Chequy or and sable on a fess gules three leopards' heads jessant, fleurs-de-lis, or – indubitably the true coat of Lewis of Gloucester (originally Wallis) – and party per pale a chevron between three oak leaves slipped. The Wallis arms appears derived from that of the Cantelupes, presumably their overlords at Abergavenny. Thus at St. Teilaw in the Thornbushes ends the search for John Lewis' place of origin in the Old World. No doubt the three chevronels come from the Joneses of Dôl in Edeirnion, who derive from Jestyn ap Gwrgant, the Lord of Glamorgan. – *John E. Manahan.*

MOUNT VERNON LADIES' ASSOCIATION LIBRARY – The research material acquired by the Mount Vernon Ladies' Association for use in the restoration work undertaken since the Association became the preserver and guardian of the home and tomb of George Washington in 1859, has formed the basis of a reference library at Mount Vernon. The primary fields of interest are the personal and domestic life of Washington, his family, and their friends and neighbors, as well as eighteenth-century Virginia architecture, horticulture, agriculture, and the domestic arts and crafts, as they relate to Mount Vernon.

The library includes some sixteen hundred manuscripts, and about one thousand photostat copies of manuscripts. It also has about three thousand reference volumes, including the Jackson Collection of Washington eulogies, biographies, etc., a large and fairly complete collection of early views of Mount Vernon, blue prints and maps, and a rather extensive file of newspaper articles, post cards, and other ephemera. General Washington's library is represented by about three hundred fifty titles, consisting of original volumes, duplicate editions, and association items.

The library is primarily used by the Association staff as an aid in the restoration work at Mount Vernon, but students and scholars are cordially welcomed to use its resources. Inquiries may be addressed to the *Librarian, Mount Vernon Ladies' Association, Mount Vernon, Virginia.*

THE PAPERS OF THOMAS JEFFERSON – In order to provide scholars with a useful guide to the location of some 60,000 documents and letters written by or to Thomas Jefferson that are in several hundred widely scattered public and private repositories in this and other countries, the editors of the Papers of Thomas Jefferson have prepared fifty-one reels of microfilm of all of the alphabetical, chronological, bibliographical, and source cards in their office. This is not a film of the edited or unedited Jefferson documents; it is only a film of the controls that have been set up for editorial purposes.

Positive copies of the film have been presented to the University of Virginia, University of Chicago, Princeton University, Henry E. Huntington Library and Art Gallery, Missouri Historical Society, and the Massachusetts Historical Society. These copies are available on interlibrary loan, and additional positive copies may be purchased from the Photoduplication Department, Library of Congress.

QUERIES

GEORGE COOKE (1793-1849) PAINTINGS – I would like to know the ownership and whereabouts of the paintings by George Cooke of Mount Vernon (executed about 1838), Petersburg, and Natural Bridge. – *Mrs. Charles M. Rudulph, 2723 Niazuma Avenue, Birmingham 5, Alabama.*

PORTRAIT OF ROBERT CARTER NICHOLAS – Anyone knowing of a portrait of Robert Carter Nicholas (1728-1780), Treasurer of Virginia and Revolutionary patriot, will please communicate with the editor. – *The Virginia Magazine of History and Biography, 707 East Franklin Street, Richmond 19, Virginia.*

THOMAS A. BUNTIN(G) – I would like to have data on Thomas A. Buntin(g) (c. 1745-c. 1850), who lived in Halifax County, Virginia, and later possibly in Norfolk County. He was a soldier in both the Revolutionary War and the War of 1812. His wife died in North Carolina about 1835. His son George was a soldier in the War of 1812. – *Richard W. Wilson, 187-31-119 Drive, St. Albans 12, Long Island, New York.*

ROBINSON – JENNINGS – I desire to know the maiden name of Mary Ann, the wife of Robert Jennings who lived in Hanover County, Virginia, as late as 1749 and whose will was probated December 1, 1806. She appears to be Mary Ann Robinson, the daughter of John Robinson and Sally Clement(s) of Hanover County. John Robinson was the son of Henry Robinson (1718-c. 1758) and his wife Molly Waring. Sally Clement was the daughter of Dr. John Clement of "Mt. Clement" and his wife Mary Anne Latane. – *Carter W. Friend, 2416 Cameron Mills Road, Alexandria, Virginia.*

BOOK REVIEWS

The Roanoke Voyages, 1584-1590: Documents to Illustrate the English Voyages to North America Under the Patent Granted to Walter Raleigh in 1584. Edited by David Beers Quinn. London: Cambridge University Press for the Hakluyt Society, 1955. Two volumes. xxxiv, 496, vi. 507. $22.50.

Professor David B. Quinn's two volumes of documents dealing with the efforts of Raleigh to settle colonies in the New World between 1584 and 1590 represent the most detailed study up to the present time of this episode in the beginnings of English expansion. These volumes are complementary to previous compilations by Mr. Quinn and by Miss Irene Wright published by the Hakluyt Society. The publications of Mr. Quinn and Miss Wright, taken together, provide the latest information and documentary evidence concerning the imperial designs of England and the alarm that these plans caused in Spain.

Mr. Quinn's latest work is a model of meticulous scholarship. Not only has he ransacked the Public Record Office, the British Museum, the archives of Spain, and sundry other sources of documentary evidence, but he has connected the documents with a series of precise explanations of the significance of the contemporary statements, and he has annotated the whole with a mass of detailed information. These volumes are a work of prodigious learning by a professor of the University of Wales who has not been content to do his explorations in Old World archives. He has actually sailed along the Outer Banks of North Carolina in Coast Guard vessels and has examined the lands and waters that his Elizabethans and Spaniards discuss. *The Roanoke Voyages* give a vast amount of information that no student of English expansion or American colonization can afford to neglect.

Mr. Quinn, however, modestly disclaims any claim to a definitive treatment. Constantly he is pointing out to the reader that he and Miss Wright have made only a beginning in the search of the Spanish archives, and that almost anything might turn up when scholars have had time to explore all the documents that have potential value. Even the Admiralty records in the Public Record Office have not been searched in detail by historians, and, he comments, "it is unlikely that the Spanish archives have now yielded by any means all of their secrets. There may yet be discoveries on the Roanoke voyages to be made in Spain" (p. 75). Be that as it may, Mr. Quinn has brought together a greater collection of material than anyone has yet seen on this subject and presented it in a way that gives it maximum utility.

But even the new documents do not answer all the difficult questions about Raleigh's projects that perplex the scholar, and Mr. Quinn is not a romancer to draw unwarranted conclusions. He himself is at pains to indicate that the documents sometimes raise more questions than they answer (cf. pp. 11-12). He does not solve the mystery of the Lost Colony, but he does establish the fact that the Spaniards did not destroy it, for as late as 1590 Spanish officials in the West Indies were worrying about the menace of the English settlement to the north (p. 776). Although he carefully

points out that John White the governor and John White the artist who made the first water colors of Indians and natural scenery in English America may not have been the same person, the evidence that he gives of their identity seems convincing to this reviewer. The reasons why Raleigh did nothing to relieve the colony on Roanoke Island have long puzzled students of colonial expansion, and if Mr. Quinn does not provide any new answers he at least emphasizes the difficulties: the prohibition against ships leaving home waters in October 1587 in the face of the threat of a Spanish invasion and the quality of the privateers who finally were allowed to set out for Virginia, privateers who spent their energy pursuing prizes. He conjectures plausibly that efforts were being made in 1589 for the relief of the colony but that these did not get under way until 1590.

The great value of *The Roanoke Voyages* lies in the multiplicity of details about the schemes for colonization rather than in any startling new discoveries, and in the skillful way in which Mr. Quinn marshals his evidence. The reader gains a vivid impression of the place of the Virginian voyages in the chess play of power politics during the critical years of the 1580's when Spain was struggling to prevent England from gaining a foothold on the north flank of her empire. Shrewd Englishmen like Hakluyt and Raleigh were aware of the enormous strategic importance of a position from which Elizabethan corsairs could swoop down on the Spanish treasure fleets and raid the very strongholds of empire. In Mr. Quinn's pages one can find fascinating and fresh evidence of the awareness of both sides of the high stakes for which they were playing. These volumes are intrinsically interesting as well as historically valuable and can be read with both pleasure and profit.

Louis B. Wright

The Folger Library

The Livingston Indian Records, 1666-1732. Edited by Lawrence H. Leder. Gettysburg: The Pennsylvania Historical Association, 1956. 240 pp. $5.00.

The role of the Iroquois Indians is an important facet of the history of Colonial America and has received greatest attention as a part of the Anglo-French conflict of the seventeenth and eighteenth centuries. This struggle to win the Iroquois as allies is an important theme most ably handled by Francis Parkman. But the relation between the Iroquois and English colonies other than the international conflict is also a significant topic that has received less study.

The Livingston Indian Records, 1666-1732, presented by the Pennsylvania Historical Association in this carefully edited volume, are most valuable for the light they throw upon Anglo-Iroquois affairs. The *Records* come from the collection of Robert Livingston (1654-1728) and fill a gap caused by the loss of part of his official records as Secretary for Indian Affairs in the colony of New York. Edited by Lawrence H. Leder, who is writing a biography of Robert Livingston, the volume contains a brief résumé of his career.

Native of Scotland, Livingston came to Albany, New York, in 1675 and was selected Secretary to the Colony (or Manor) of Rensselaerswyck. In 1686 when

Albany received a charter, he was appointed to several municipal offices and later served in the Governor's Council and in the New York Assembly, holding the position of Speaker of the latter until 1725. Of special interest for this study was the office of Secretary for Indian Affairs which Livingston convinced the newly created Board of Trade to establish in 1696 and to which he was appointed for the colony of New York. The major duties of the position were to keep the records of the Indian Commissioners and to assist at the Indian Conferences. Although the office was clerical by nature, Livingston made it more than that by using the knowledge obtained to advance the interests of New York and the English vis-à-vis the French and also to extend his own influence as consultant to various governors of New York.

By the 1750's the records of the office were contained in four bound volumes. During the American Revolution they were taken to Canada and eventually deposited in the Dominion Archivist in Ottawa, but later the first two volumes covering the period from 1677 to 1723 disappeared. When New York sought in 1780 to make good her claim to the trans-Allegheny West, she turned to the private collection of Robert Livingston as an alternate source of the Indian material. Although not as complete as the original two volumes, his collection contained the greater part of these records and remains today our major source in filling this void.

Part of the *Records* were in English, part in Dutch. When both versions were available, the editor used the English in this volume. When material existed only in Dutch, a translation was made into English.

There is some duplication with E. B. O'Callaghan's *Documents Relative to the Colonial History of the State of New York*, with Cadwallader Colden's *History of the Five Indian Nations*, and with Peter Wraxall's *Abridgment of Indian Affairs*. When duplicates were found in O'Callaghan's collection, the editor excluded them unless significant variations existed. For some of the same documents found in Colden and Wraxall, comparisons have been noted.

While many of the *Records* pertain to Iroquois negotiations with New York, there is considerable material concerning relations with the colonies of Virginia, Maryland, Pennsylvania, and New England. For Virginia there are accounts of negotiations either by Virginia agents or by Maryland officials authorized to represent Virginia including Henry Coursey in 1677, William Kendall and Southey Littleton in 1679, Henry Coursey and Philemon Lloyd in 1682, Lord Howard of Effingham in 1684 and 1687, William Byrd I and Edmund Jennings in 1685, and Alexander Spotswood in 1722.

The *Records* themselves constitute the major part of the volume (pages 29-238). In addition to the sketch of the career of Robert Livingston, there is a brief summary of the history of the Iroquois by Paul A. W. Wallace and a "Glossary of Indian Tribal Names." There is no index.

While not all of the material of the *Indian Records* is new, this attractive volume is welcomed to help fill a conspicuous gap and to permit a more comprehensive study of the role of the Iroquois in Colonial America.

W. Stitt Robinson, Jr.

University of Kansas

Walter Wharton's Land Survey Register, 1675-1679: West Side Delaware River, From Newcastle County, Delaware into Bucks County, Pennsylvania. Edited by Albert Cook Myers. Wilmington: The Historical Society of Delaware, 1955. 112 pp. $4.00.

The alertness of a workman, the editorial skill of Mr. Myers, and the assistance of the late Pierre S. Du Pont made possible the publication of this volume.

The original manuscript was saved from destruction in a pulping machine of a paper plant in the nick of time by an employee who was attracted by the antique writing. It has undoubtedly been reproduced with great care and accuracy by Mr. Myers, who has had many years of experience in the editing of historical manuscripts. In those places where the original is torn or illegible, he has not attempted to supply the missing words but has given instead the length of gaps. Fortunately, they are usually less than an inch.

In the main, this volume is new information that will be found a useful supplement to certain court records of Pennsylvania and Delaware. From its description of the land surveyed local historians may be able to ascertain more accurately the names of the early landowners of the region, the size of their landholdings, early place names, and the location of places. Over a hundred names of early Swedish, Dutch, and English settlers of Delaware and Pennsylvania are included in the index. About seventy place names are mentioned.

Portraits of Sir Edmund Andros, who was the deputy governor of the region, and James, Duke of York, who was its proprietor, are among the illustrations of this volume. It also contains facsimiles of several pages of the manuscript. The edition is limited to 500 copies.

Robert Leroy Hilldrup

Mary Washington College

Charles McLean Andrews: A Study in American Historical Writing. By A. S. Eisenstadt, New York: Columbia University Press, 1956. xx, 273 pp. $5.00.

The greatest name associated with the history of the English colonies in America is that of Charles McLean Andrews, for many years Farnam Professor of American History at Yale University. Andrews' published works numbered some twenty volumes, considerably more articles, and several hundred book reviews. He devoted the years of his maturity to rewriting the story of early American history and no man has contributed so much to that field of study.

Mr. Eisenstadt has not attempted to write a formal biography of this great scholar. He is not concerned with his family connections or with his personality, "except when they impinge upon the ideas and substance of his historical writings." Part I of this scholarly and lucidly written volume deals with the development of Andrews' historiography during his formative years, when he was concerned primarily with European history and before he fully entered upon a study of American colonial history. The author discusses the historiographic legacy of Herbert Baxter Adams and the Johns Hopkins Graduate School, but he says that if Andrews had learned the

rudiments of the scientific ideal in the school of Herbert Adams, "he had learned its refinements in the school of English historians." In 1935 Andrews, writing to L. H. Gipson, said: "German methods and historiography did not get under my skin. My master was Frederick William Maitland more than anyone else and I was far more influenced by the English school of that day (Gross, Seebohm, Round, Vinogradoff), that represented a reaction from the Freeman-Green-Hallam-Macaulay School, which really at bottom H. B. Adams stood for."

Part II examines Andrews' contribution to the field of American colonial history. As early as 1891, he had recognized that "the lucid, broad-minded history" of early America had yet to be written. To write such a history became a matter of personal ambition when, in 1893, Andrews first explored the vast materials of the Public Record Office in London. Henceforth the care of manuscript materials was a matter of the deepest concern to him. The "true history" of the American colonial past, he said, could be found mainly in the British archives. "The road to the colonies was the royal road through Whitehall." His monumental archival labor was contained in a one-volume *Guide to the Manuscript Materials for the History of the United States to 1783, in the British Museum, in Minor London Archives, and in the Libraries of Oxford and Cambridge* (1908), and a two-volume *Guide to the Materials for American History, in 1783, in the Public Record Office of Great Britain* (1912-1914). In Andrews' opinion, these Guides represent "my chief contribution to the field." His four-volume *The Colonial Period of American History*, which he wrote in his final decade would, he believed, in time be superseded. But "if my name lives, it is because I was the author of [the] Guides."

Part III attempts to see how Andrews' historiographic principles were reflected in the writings of his later years, and how these principles were reflected in areas other than his historical writings. Part IV explores the system of Andrews in relation to that of the imperial school to which he belonged.

In his published works, as well as in the classroom, Andrews tried to put back the "colonial" into American colonial history. He saw three basic and underlying factors of pre-national history: "the mother country, the colonies, and the relations between them." The colonies were best viewed "not from within, as is commonly done, but from without . . . for this purpose I have approached the subject from the English end, from the land whence the colonists came and of which they were always legally a part." Over and over he asserted: "The world of the colonies in the seventeenth century was an English world." As Mr. Eisenstadt aptly says: "He had restored the colonies to England. He had written their story as a phase of English expansion. He had seen America as a frontier region." The colonial world of the seventeenth century, according to Andrews, could not be understood without reference to the world of the mother country. "In their basic patterns, the American ways were but reproductions of the English originals." The problems of our early history were "British colonial problems first and American problems afterward."

Andrews maintained that British colonial policies, which later came to be known as mercantilism, were practical expedients to meet the needs of a growing and expanding nation. Mercantilism was not a theory, but a condition, not an exact system, but one changing with the times and more characterized by diversity of

opinion than by orthodoxy. English mercantilist practices were motivated by self-interest, not by a "desire to tyrannize or even to meddle." Andrews was not convinced that a policy of self-interest for the Mother Country necessarily meant a policy of deprivation for its overseas possessions. He thought that the injurious effects of British Navigation Acts and other trade laws had been greatly exaggerated by many historians, and he doubted whether any of them had "materially hampered the progress of colonial industry." He concluded that the Old Colonial System "did not at any time before 1764 seriously interfere with the growth of prosperity of the colonies."

A Chronology of Andrews and His Age, 1863-1943, thirty-two pages of Notes, a Bibliography of the Writings of Charles McLean Andrews as well as Other Writings used in the preparation of this book, and an adequate index round out this splendid volume. Mr. Eisenstadt has made a valuable contribution to the field of American historiography.

HUGH T. LEFLER

University of North Carolina

Prince William County, Virginia, Will Book C, 1734-1744. Abstracted and compiled by JOHN FREDERICK DORMAN. Washington, D. C.: John Frederick Dorman, 1956. vii, 135 pp. $5.00.

IN the field of American genealogy Virginia has long been a neglected land. It has been unable to match such areas as New England and the Middle Atlantic States in the copiousness of printed source materials such as the priceless Vital Records of Massachusetts, the long series of *New Jersey Archives* (with its abstracts of wills and other early records), and the valuable information contained in the *Pennsylvania Archives.*

But during the past few years the frequent appearance of books containing transcripts or abstracts of Virginia wills, marriage records, and census records has demonstrated that the Old Dominion has untapped sources of important genealogical information. Mr. Dorman's work on Prince William County, which was created in 1730 from the upper parts of King George and Stafford counties, covers only a ten-year period, but it provides a significant link with our colonial past. As stated in his preface, "Will Book C is the only colonial will book remaining for Prince William County."

Care and accuracy are reflected on every page of the work. The compiler has preserved the flavor of the original documents, of which a notable example is the 1735 will of John Fishback, who named his wife "Meary Doarterty," his daughter "Catren Recttor" (to whom he gave 50 "eaquers" of land), and his sons who received "ten hunder and tunty aite akers of land for to be divided in four parts" (pp. 4-5). The will of the celebrated clergyman, Henry Hager, "minister of the Word of God among the Germans at Licking Run in Prince Wm. County" (dated April 10, 1733, proved March 28, 1737), is abstracted on page 25. He was the leader of the short-lived colony of Germanna, in present Orange County, in 1714.

In addition to abstracts of wills, inventories and administrators' and executors' bonds appear in the volume. The historical notice of early Prince William County in the preface and the complete index at the end add to the value and usefulness of the work.

MILTON RUBINCAM

National Genealogical Society
Washington, D. C.

Hanover County Taxpayers, Saint Paul's Parish, 1782-1815. Compiled and prepared by WILLIAM RONALD COCKE, III. Columbia, Virginia: William Ronald Cocke, 1956. viii, 158 pp. $10.00.

MR. WILLIAM RONALD COCKE, III published in 1940 *Hanover County Chancery Wills and Notes,* which made available to genealogists and students of Hanover County history valuable data gleaned from the chancery papers left at Hanover Courthouse in 1865, when the other records were carted off to Richmond for safe-keeping and there were burned except for two deed books. Now, in a comparable format, Mr. Cocke has published this material, which he compiled from the personal property tax lists of St. Paul's Parish, Hanover County, from 1782 to 1815.

The compiler has reduced a vast amount of data into a thin volume by avoiding unnecessary repetition and by arranging the names of taxpayers in alphabetical order and the details of the property listed under each in chronological sequence.

In the preface to this volume, the compiler sets forth the statutory requirements for assessing poll taxes and for listing personal property for taxes. "Studs (and jacks), riding vehicles, slaves of all ages, Horses (Mares, Colts and Mules), and Cattle." Changes in the laws from time to time extended the assessments of personal property until many other chattels were included, grist mills, saw mills, dwellings of the value of $500.00, and such items of furniture as clocks, watches, pictures, portraits, gold and silver ware. All of these were listed with some detail depending on the Commissioners' interest in making definitive records. Licenses were issued for physicians, lawyers, ordinary keepers, and keepers of public houses before 1815.

Mr. Cocke has shown in some detail under the names of the Abbotts, Colonel Richard Anderson, Richard Anderson, Jr., and the Bakers the possible facts that can be deduced from the meager record set down by the commissioners. The facts derived in this way relate to a taxpayer's birth date, marriage date, and death date, the birth dates of his children and his legatees and other relationships which are of significance to students of family history, and are particularly valuable in a county so destitute of records.

The signatures of numerous petitioners taken from the concurrent legislative petitions from Saint Paul's Parish have been reproduced and placed at the head of the signer's listing. This is a unique innovation, but while interesting it adds nothing to the value of the subject matter. The texts of the petitions mentioned have been included in an appendix. An index to those names and places which are not found readily in the alphabetical arrangement of the taxpayers is a worthwhile addition.

A spot check of numerous items against the originals in the archives of the Virginia State Library has disclosed no errors. To transcribe and compile such a mass of data has been a labor of magnitude, and the compiler should be commended highly for his meticulous accuracy in this achievement. It is another valuable addition to the fast growing mass of published records, which are a great help to researchers and students, because they are readily accessible.

It is to be hoped that Mr. Cocke will continue this line of work, and in the future render the land-tax returns of Saint Martin's Parish in like manner, and pin point the sites of the old plantations on a map of the parish, so that students and others interested, can easily find a desired spot in Hanover.

MALCOLM H. HARRIS

West Point, Virginia

Johnny Green of the Orphan Brigade: The Journal of a Confederate Soldier. Edited by A. D. KIRWAN. Lexington, Kentucky: University of Kentucky Press, 1956. xxviii, 217 pp. $3.50.

THE salient virtue of this journal is that Johnny Green had something to write about: he saw a great deal of the Civil War. From October 1861 to April 1865 he fought the Yankees, nearly all of this time as an infantryman in the First Kentucky or Orphan Brigade in the Army of Tennessee. He was at Shiloh, Stone's River, Chickamauga, and Missionary Ridge. He helped defend Atlanta against Sherman. Finally, in the last desperate months he became one of Wheeler's cavalrymen and opposed Sherman's march through Georgia and South Carolina. April 22, the date he and his comrades learned near Camden, South Carolina, that they had been surrendered, is described in the journal as "the blackest day of our lives."

It was not until about 1890 that Green got around to writing the journal for the benefit of his daughters, drawing upon his memory and, apparently, upon diary notes made during the war. Often these notes seem to have been incorporated verbatim into the journal. They give a sense of immediacy to the narrative that is likely to make the reader forget that Green wrote it in its present form long after the events he describes. One feels too that Green, an observant but unassuming and matter-of-fact reporter, tried sincerely to recreate the war just as he fought it, without exaggeration or false heroics.

A. D. Kirwan, in addition to providing explanatory footnotes and an able introduction, has divided the journal into chapters, given them titles, and preceded each with an editorial summary of the military events in which Green and the Orphan Brigade participated. Thus Green's personal story, which he tells from the circumscribed viewpoint of the man in the ranks, is related to the larger strategic picture. The summary of the battle of Chickamauga (pp. 87-89) might have been handled more precisely. The reader who does not know otherwise is likely to gain the impression that the battle was fought entirely on September 20 instead of on September 19 and 20, as no mention is made of fighting on the nineteenth. A map of the battle (facing p. 92) shows Union and Confederate positions on September 20 with no indication that this is the second day of fighting. The editor states (p. 87)

that Bragg was reinforced "on the eve of battle by Longstreet's famed corps. . . ." More accurately, a part of Longstreet's corps under Hood reached Bragg on the eighteenth, a part of it, including Longstreet, arrived on the nineteenth, and four brigades together with the corps artillery did not arrive in time to take part in the battle.

One should not, however, read this book in order to trace the complexities of troop movements, but rather to learn more about the daily life of the Confederate soldier – his mud marches, his meager rations, his fun both innocent and guilty, his bouts with fever, his savage encounters with the men in blue. It is all here, in abundance, in Johnny Green's story.

HAL BRIDGES

University of Colorado

Lincoln's Fifth Wheel: The Political History of the United States Sanitary Commission. By WILLIAM QUENTIN MAXWELL. New York: Longman's Green & Co., 1956. 372 pp. $5.00.

THE title and subtitle of this book might well be reversed. It purports to be "the political history of the U. S. Sanitary Commission" – only incidentally is it "Lincoln's fifth wheel." Publishers and an unknown fraction of the reading public may favor catch-phrase titles, but the historian and the serious reader will prefer to savor on the title page meat and not a synthetic flavor.

Still, only mildly critical of an otherwise important contribution to our knowledge of the Civil War, legitimate objections can be raised to a literary style which leans over-heavily on a multiplicity of quotations. Such use of original material may add color and suggest authenticity, but to this reviewer it robs the book of the clarity and unity that one has a right to expect in historical writing.

Here then is basically a good book, with much new factual material bearing on the Civil War, written from the Northern viewpoint about the enormous activities and influence of a voluntary lay organization designed to further the war effort through the direct contributions of the great body of men and women living north of the Mason and Dixon line to the physical well-being and health of their fighting men.

The Sanitary Commission, headed by a gifted and dynamic director, Frederick Law Olmsted, administered by able commissioners, and guided by a consecrated standing committee, which met every day for the duration of the war, reached down to the grass-roots of the country, to the support of "the little people" in every town and hamlet. With such undergirding the Commission's influence was so strong that Lincoln's lukewarmness, Stanton's antagonism, and the Medical Bureau's stand-offish attitude were ineffective in blocking its efforts.

The Commission had behind it the power of money and needed supplies (valued at twenty-five million dollars). But its greatest force came from the favorable public opinion that supported it. So armed, through its representatives, it won access to the Congress, to the Chief of the Medical Bureau (later the Surgeon General), to the Secretary of War, to the President himself. And it used them all. It was critically

advisory. The ambulance system, including the ambulance corps, railway and steamship transportation, all stood in need of radical reform. With vision and persistence the Commission led the way. The care of infectious diseases, the dietary needs of hospital patients for green vegetables, the morale factor involved in keeping sick and wounded and discharged soldiers in contact with their families, are but a few examples of the work the Sanitary Commission undertook to do. Presumably supplementary to the Medical Bureau, it nevertheless often carried the whole burden of relief.

The organization made its influence felt through the publication of *The Sanitary Reporter*, and through numerous educational monographs written by distinguished doctors dealing with the latest knowledge concerning military medicine. These monographs were distributed freely to regimental surgeons in the field. *The Hospital Directory*, the only accurate check list of names, rank, address of the sick and wounded became indispensable to the medical department and to the public.

The Commission's supplies ranged from lint to chloroform to choice foods, from instruments to litters to ships reconverted from troopships to hospital transports. (Olmsted personally supervised the conversion of the *Daniel Webster*.) The services of the Commission included the regular reports of its inspectors, the general relief afforded by its agents and field relief (paid personnel who lived with the ambulance corps), and special relief such as board and lodging for discharged soldiers, and the inspection of prison camps which were often supplied rations and clothes. Presumably Confederate prisoners in Northern hands shared in this humane care. But little is made of it in this North-slanted book.

All this and more was accomplished not without friction, intrigue, hurt feelings, and antagonism, but never did the finger of suspicion point to graft or dishonesty.

The Red Cross, meeting in Geneva, was organized during this period. American participation was not enjoyed at the first meeting, and official recognition in this country came slowly, but it is clear from the record of this book that Americans and our Civil War experience helped to shape the form ultimately taken by the Red Cross.

It would be a mistake not to observe that, in addition to the history of the U. S. Sanitary Commission, there is something to be learned from this book about the Civil War itself, and a great deal about the Medical Bureau of the Army, which at the onset of hostilities was a feeble, fruitless failure, but which, with experience under the constructive criticism of the U. S. Sanitary Commission, made tremendous strides. It can be said that the modernization of the medical corps of the Army, with such outstanding achievements as the establishment of the Army Medical Museum, the Library of the Surgeon General's Office, the *Index Medicus*, the Army Medical School, and the *Medical and Surgical History of the War of the Rebellion*, and a reasonable freedom of operation within the framework of the War Department, with appropriate rank for its officers, can be dated from this great civil struggle.

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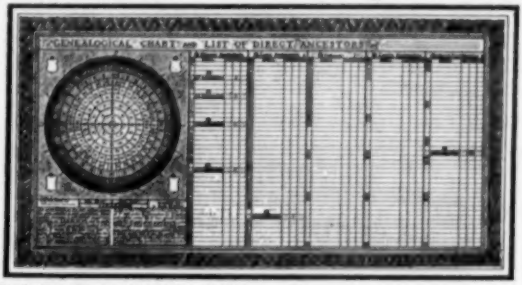

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